Vol. IX, No. 8 August, 1933

SOAP

with which is included an

Insecticide & Disinfectant Section

Published by MACNAIR-DORLAND COMPANY, INC., 136 Liberty Street, New York

TERPINEOL
PRIME NO. 1

● A delicate, soft odor reminiscent of fresh Lilac—that's the test of a good Terpineol. Terpineol Prime No. 1 deserves this classification because of a sweetness and softness of odor exceeded by no other Terpineol in the same price range.

● Terpineol Prime No. 1 is excellent for soaps because of its absolute permanence against caustic alkali—its resistance to fatty acids—its low price.

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BRANCHES:

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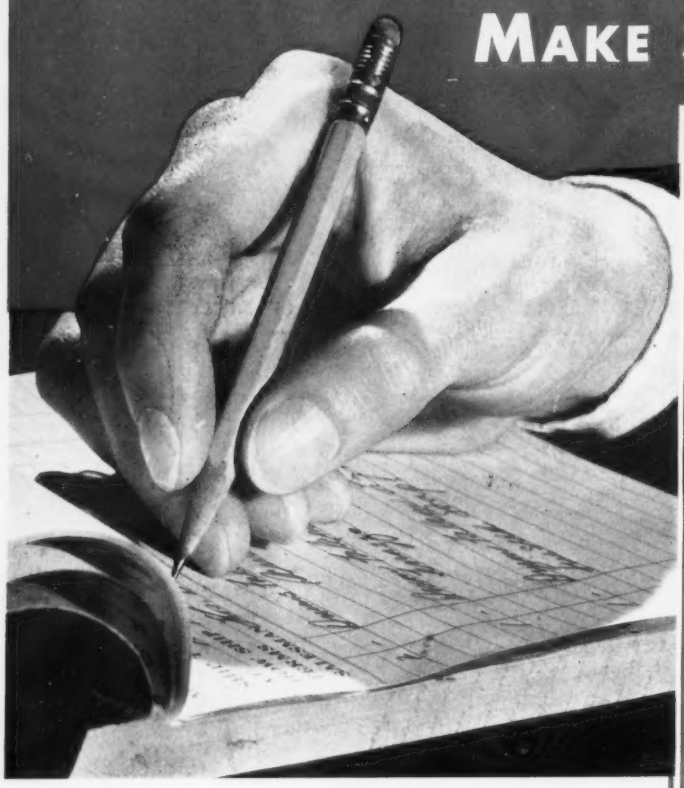
Chicago San Francisco Montreal Havana

Dependable Falcon Floor Cleansers Make Sales Easier



FALCON
ECONOMY SCRUB SOAP

A perfectly balanced neutral vegetable oil liquid soap which is very economical in actual use. Cleanses thoroughly and rapidly. Available in two odors—Sassafras or Pine.

•

FALCON
POTASH SCRUB CLEANSER

A safe liquid soap to use on any type of floor. Contains a high soap content which gives it exceptional cleansing power . . . even when diluted.

•

FALCON
LIQUID TERRAZZO SOAP

This soap is especially made for tile, terrazzo and marble floors. Removes oil, grease and traffic marks quickly and easily and leaves an attractive lustre on the floor after cleaning.

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FALCON
LINSEED OIL SOAP

A neutral Linseed Oil soap which bears the approval of the country's leading linoleum manufacturers for it leaves the linoleum resilient and clean. Widely used as an automobile soap . . . it preserves the body finish.

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FALCON
VEGETABLE OIL JELLY SOAP

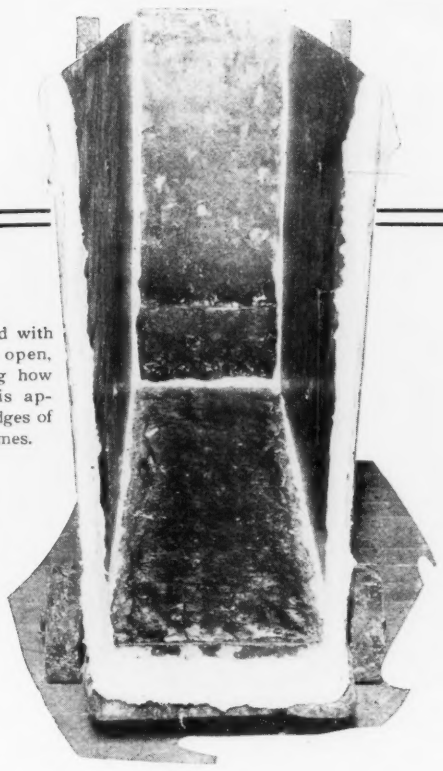
This is an effective neutral soap. Made strictly of vegetable oils. Has ample soap content for satisfactory cleansing performance. Contains no excess alkali and is very economical.

The better the cleanser, the more satisfied the customer and the easier the repeat order. Made of better ingredients, the cleansers listed give cleaner floors... greater value... more satisfaction. That is why Falcon Floor Cleansers are always dependable...always stay sold

EAGLE SOAP CORPORATION

25 E. Jackson Blvd. Chicago, Illinois

NEW METHOD of caulking soap molds with Kimpak Crepe Wadding*



Soap mold with one end open, illustrating how KIMPAK is applied to edges of side frames.

Soap mold closed, showing KIMPAK wedged into position as a caulk.

IN the manufacture of cold process soap, a number of concerns are using KIMPAK Crepe Wadding in place of soap for caulking the corner joins of the molds.

It is found by actual experience over an extended period of use that not only can the labor of caulking be speeded up 100% (a saving in itself), but the cost of KIMPAK is very low even compared to the soap formerly used. People who have used this method from six months to a year and a half tell us they would not go back to the old way.

*KIMPAK is a clean, white, fluffy wadding. For soap mold caulking it comes in coils 3 inches wide, 36 feet long and can be pinched off by hand to convenient length strips.

Kimpak
REG. U.S. PAT. OFF. & FOREIGN COUNTRIES
CREPE WADDING

SOAP

Kimberly-Clark Corp., Mfrs., Neenah, Wis.
Sales Offices: 8 S. Michigan Avenue, Chicago; 122 E. 42nd Street, New York City; 510 W. 6th Street, Los Angeles, Calif.

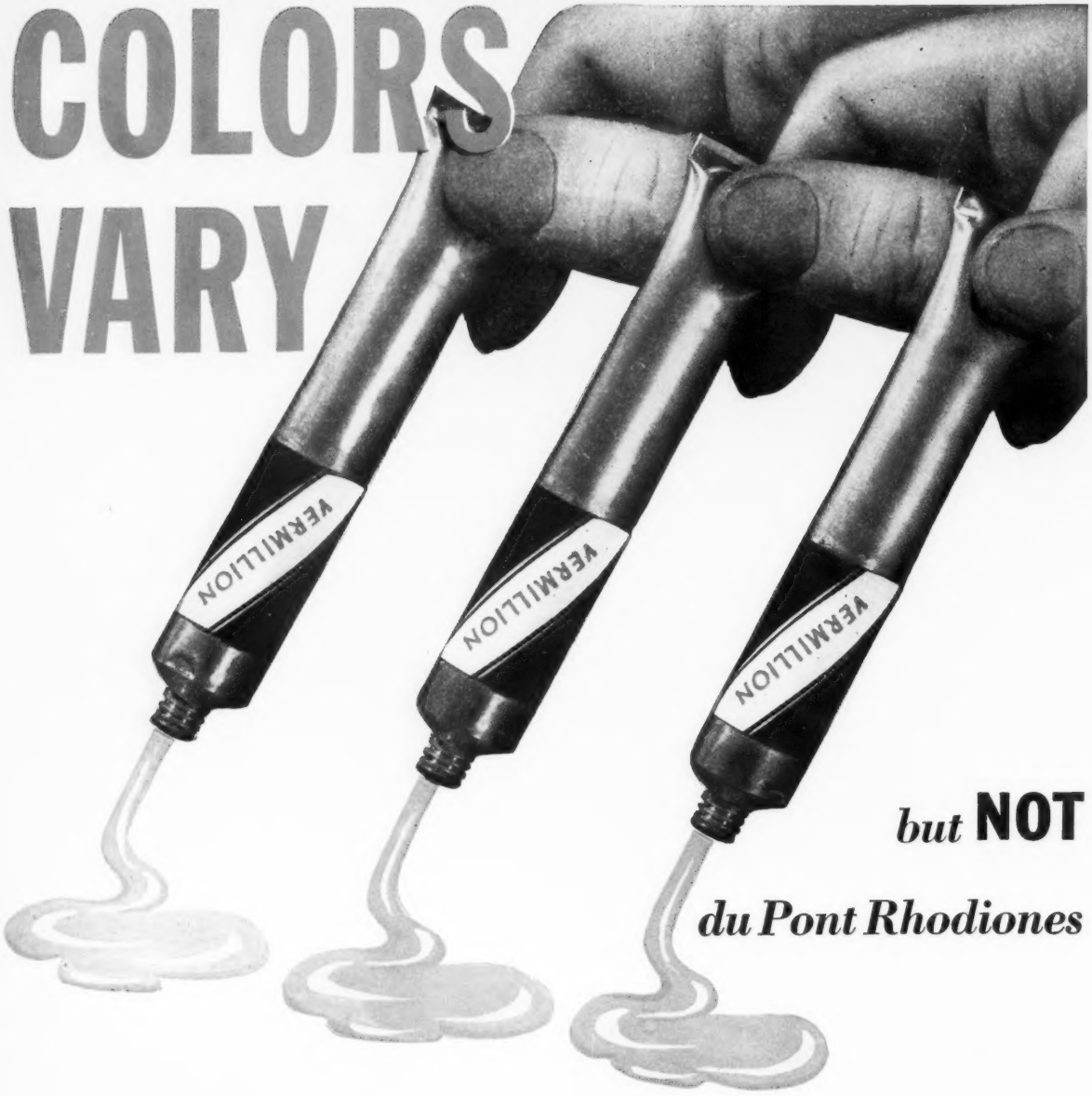
☐ Please send full information on KIMPAK.
☐ Have representative call.

Name.....

Address.....

City.....

COLORS VARY



but **NOT**

du Pont Rhodiones

You'll find their standard of uniformity and purity always dependable in formulae.

RHODIONE A. B.

This du Pont Aromatic is both chemically pure and free from any traces of fractions or by-odors which modify the perfume value of the Rhodione.

Because its purity gives the manufacturer a sure laboratory control of his perfume formulae, Rhodione A. B. is especially recommended for soaps.

Such control of formulae is not possible where crude Rhodiones are used.

METHYL RHODIONE

Here is a highly purified synthetic violet of the stem character.

And like all du Pont Aromatics can be relied upon for absolute purity and uniformity today, tomorrow or next year.

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ORGANIC CHEMICALS DEPARTMENT
Fine Chemicals Division
WILMINGTON, DELAWARE

SOLE DISTRIBUTORS FOR Société Usines Chimiques, Rhône—Poulenc, France

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Gentlemen. PLEASE SEND ME SAMPLES of your_____

_____ I want to test them for myself. It is understood this does not obligate me in any way.

*Name*_____

*Address*_____

*City*_____ *State*_____

SOAP

Reg. U. S. Patent Office

Volume IX
Number 8

August, 1933

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INSECTICIDE and Disinfectant Section, which is included as a department of every issue of SOAP, begins on page 67. Oil, Fat & Soap Production Section begins on page 55. These sections contain news, articles and editorial opinion of particular interest to their respective industries.

«

IRA P. MACNAIR
Editor

DR. FOSTER D. SNELL
Consulting Technical Editor

GRANT A. DORLAND
Business Manager

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Published monthly on the 15th by

MACNAIR-DORLAND COMPANY, INC.
136 LIBERTY STREET NEW YORK, N. Y.

Subscription rate $3.00 per year. Foreign, except Canada, $4.00. Canadian, $5.00. Copy closing dates—7th of month of issue for reading matter and 25th of month preceding month of issue for display advertising. Entered as second-class matter, April 11, 1931, at Post Office, New York, N. Y., under act of March 3, 1879. Circulation, July, 1933, issue 2,819 copies. Total distribution 3,000.

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DEEP HOOK-SHAPED THREAD
PATENTED

SPECIAL NON STICKING LINER
PATENTED

This liner is entirely different from ordinary rubber compounds. It contains a special lubricating material which constantly flows to the surface and prevents the liner from sticking to glass, even when subject to sterilizing temperatures.

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DON'T think that all one piece vacuum caps are alike. They're not. The Crown One Piece Vacuum Screw Cap has two important features that make it distinctly different—and better.

Both features are patented. They are not to be found in any other cap. And both work together to provide better sealing, easy removal and perfect resealing for many types of products, regardless of the packing methods used or whether the product is sterilized after sealing.

Write today for samples and prices of this remarkable vacuum cap. Or, better still, let a C. C. & S. representative explain how and why it will give you better sealing and greater economy in the packaging of your product.

Especially SUITED FOR

- CATSUP
- CHILI SAUCE
- SYRUP
- OLIVES
- PICKLES
- JAM
- JELLY
- PRESERVES
- MINCE MEAT
- APPLE BUTTER

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„EFFECTIVE SEALING „SUITABILITY FOR PRODUCT „EASY APPLICATION „EASY REMOVAL „BEAUTIFUL DECORATIONS „DEPENDABLE SUPPLY „NATION WIDE SERVICE

TO OBTAIN THE RIGHT CLOSURE FOR YOUR PRODUCT

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WORLD'S LARGEST MAKERS OF CLOSURES FOR GLASS CONTAINERS

It's all in the CAP

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New NOPCO Auto Polish

Proves a *Quick Seller*

SALES went up 45% last month! That indicates how Nopco 1669 Auto Polish has caught on — with the public — and with the jobber and dealer as a profit-maker!

Repeat orders are quick and steady, because Nopco 1669 offers these four advantages: (1) It can be easily applied either to part or to the whole of the car before polishing off. (2) It is both a cleanser and a polish. (3) It leaves a high lustre and a clean, glistening surface. (4) It's economical.

Offered only to the trade, in bulk. It's a quick seller and sure-fire repeater, with attractive profit possibilities.

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Nopco 1716-AL-2

An improved furniture polish that actually cleans as it polishes. It adds a rich, lustrous film and leaves no trace of oiliness or greasiness. Easy to apply and economical. A popular seller.

PINE OIL BASE

Nopco Albasol AR

An excellent base for making soluble pine oils for spraying, disinfecting, and insecticide purposes.

RUBLESS FLOOR WAX

Nopco 1725

A liquid floor wax that dries to a lustrous, durable film. Its water-resistant properties compare favorably with solvent wax solutions. A stable emulsion.

LIQUID SOAP BASE

Nopco Kokobace

A high grade, concentrated cocoanut oil potash soap. Used extensively for making perfumed soaps and shampoos.

NOPCO quality products are always uniform and of unvarying standards. This means complete satisfaction to ultimate consumer. Write for full information about the products in which you are interested.

NOPCO

NATIONAL OIL PRODUCTS COMPANY

Boston Chicago **HARRISON, N. J.** San Francisco Hamburg, Germany

SOMETHING
ON THE PACKAGE says
...Something INSIDE is a BUY!

YEARS of *doing things* with CANS have taught us to put "something on the ball" ... something that brings winning scores ... and builds sales records for Packaged products.

SOMETHING *on* the PACKAGE makes someone pick *your* product from among all others.

We have put that "something" on many PACKAGED leaders.

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- WHEN you want them!

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110 E. 42nd ST., NEW YORK CITY
ESTABLISHED 1900
SALES OFFICES AND PLANTS • NEW YORK CITY • BALTIMORE • BROOKLYN • CHICAGO
THE FISCHER CAN COMPANY DIVISION • HAMILTON • OHIO

Do *you* want a *Partner*?

If your present sales and profits are entirely satisfactory to you, then this offer may not be of interest.

On the other hand, if you can stand more business NOW, here is a suggestion that actually works and has proven itself again and again.

Just add a few suitable long profit products to your line that you can sell to your present customers *without going to the bother and expense of investing in machinery, stocks of raw materials, labels,* etc.

We will take care of all that for you,—and supply you with high grade finished products at prices so low that it would scarcely pay you to make them up yourself.

In addition, we have attractive imprint labels ready for your name and address.

OUR HALF	YOUR HALF
Making up for you high grade finished products at minimum cost.	Selling a few extra profitable items to your present trade and watching your sales jump.

There are some concerns who are actually *making more money today than ever before.* Clifton Products can aid you, too.

CLIFTON CHEMICAL CO., INC.

CLIFTON BUILDING

246 Front Street
New York City

MEMBER NATIONAL INSECTICIDE AND DISINFECTANT MFRS. INC. 1914 INC.

Quality Sanitary Products Since 1912

TEAR OFF HERE

CLIFTON CHEMICAL CO., INC.
246 Front Street, New York City.

Your plan is worth looking into. The items checked would probably help increase our sales. Please quote:

- ☐ Semi Castile Liquid Soap
- ☐ Liquid Soap Base
- ☐ Liquid Soap Dispensers
- ☐ Metal Polish
- ☐ Deodorizing Cakes and Blocks
- ☐ Deodorizing Block Containers
- ☐ Rub-No Wax
- ☐ Silver Polish Paste
- ☐ Liquid Floor Cleanser
- ☐ Oil Soap
- ☐ Coal Tar Disinfectant
- ☐ Pine Tree Disinfectant
- ☐ Shampoo Liquid and Base
- ☐ Shaving Cream

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(NAME)

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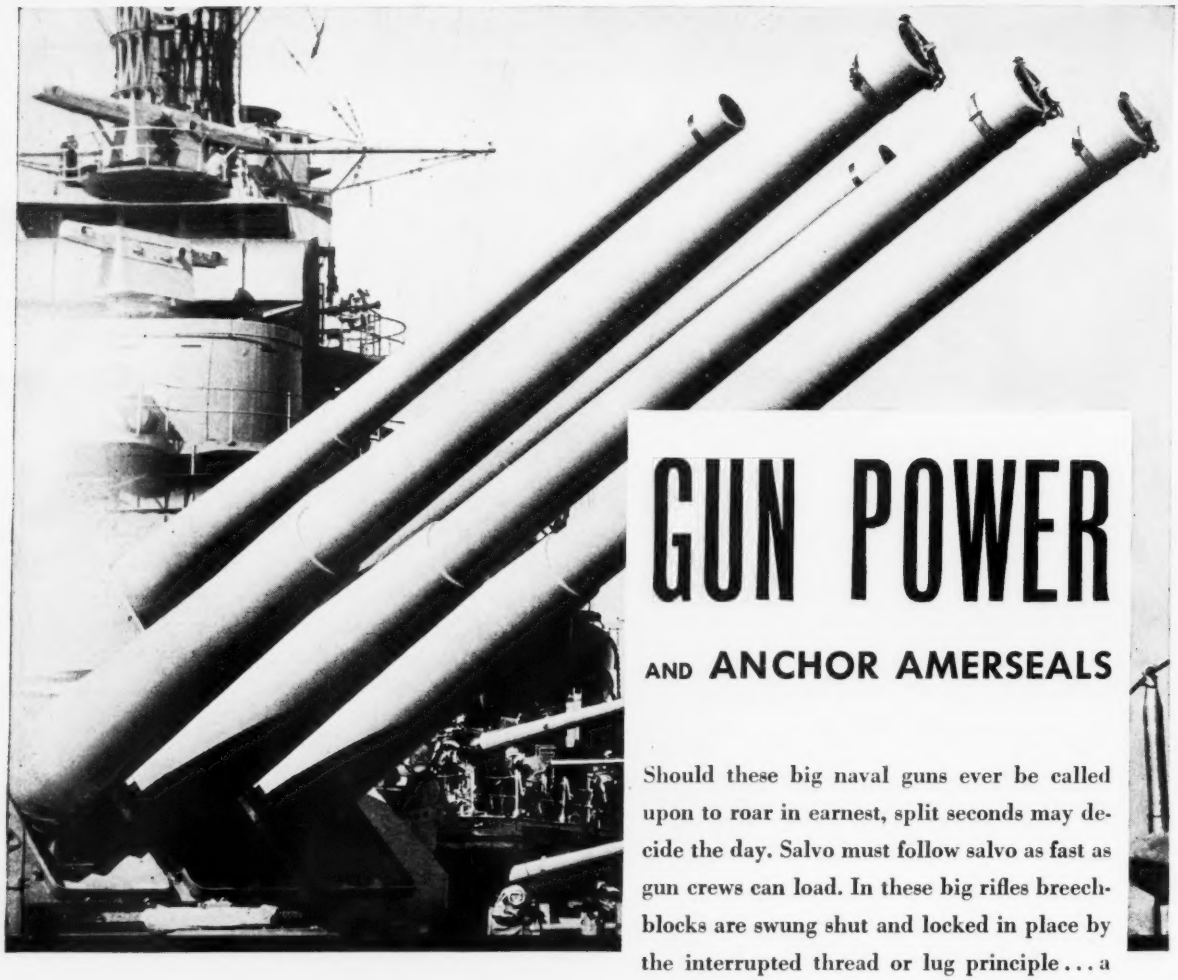
(ADDRESS)



GUN POWER

AND ANCHOR AMERSEALS

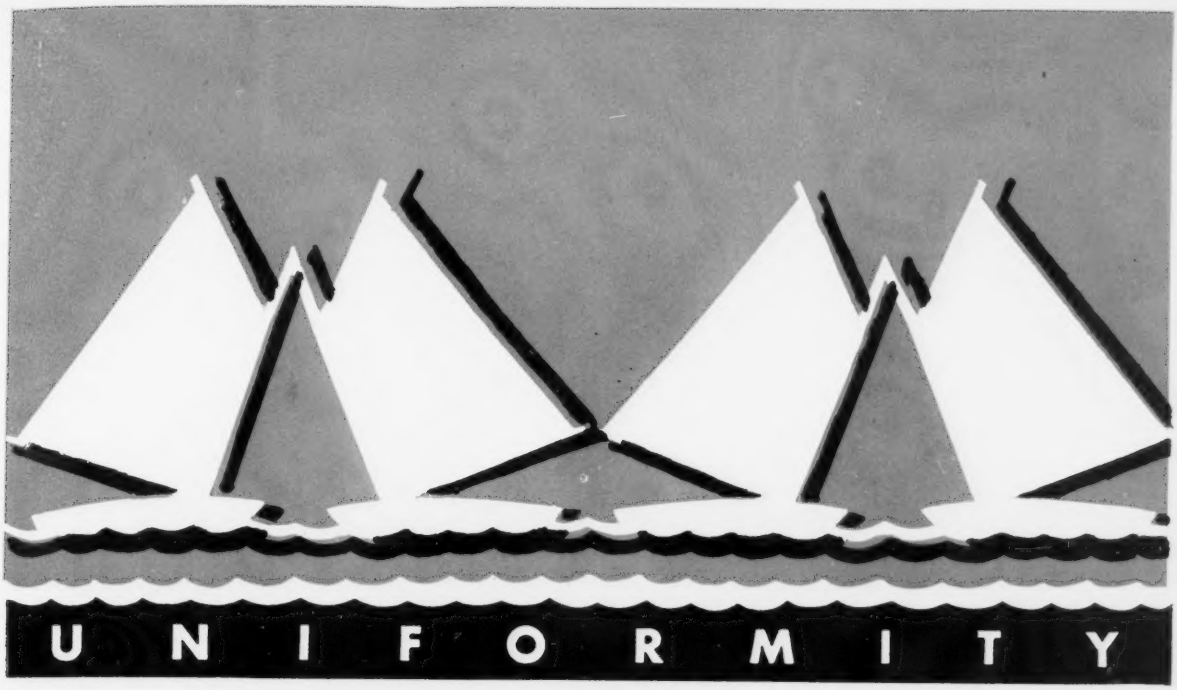
Should these big naval guns ever be called upon to roar in earnest, split seconds may decide the day. Salvo must follow salvo as fast as gun crews can load. In these big rifles breech-blocks are swung shut and locked in place by the interrupted thread or lug principle . . . a positive, sure, speedy method. Time is too precious to think of screwing the breech-blocks home, as one would a nut on a bolt. • That's why the Anchor Amerseal, likewise operating on a lug principle, is not only efficient, forming a tight uniform seal, but also is easy and speedy to manipulate. Just as the fate of a nation may depend on speed in operating *protective* guns, so may the fate of a sale depend on the speed and ease with which the *protective* closure may be applied and removed. Anchor Amerseals give you a big advantage, that you cannot afford to lightly forego.

Anchor Cap & Closure Corporation

Long Island City, N. Y. **Toronto, Canada**

Branches in all Principal Cities

ANCHOR AMERSEALS SEAT SECURELY—COME OFF READILY



Niagara

UNADULTERATED
PARADICHLOROBENZENE

PARA

Niagara Para is your assurance of uniformity . . . crystals that are always fine, white and clear.

And Pearlpara — Niagara Para in bead form — gives you this same uniformity.

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Associated with Electro Bleaching Gas Co. Pioneer Manufacturer of Liquid Chlorine

ALBERT VERLEY
INCORPORATED

GERANIUM ARTIFICIAL GERANIOLS

for Soap Perfume

With the market for natural geranium oil in its present unsettled condition, the above products should be seriously considered by the soap manufacturer. Both work excellently in soap and will provide the geranium note at a cost which will be reasonable and at the same time stable. May we submit generous working samples?

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In our laboratories, we have facilities for manufacturing a complete line of compounds for soaps of all kinds, theatre sprays, para products, polishes, fly sprays, etc. Besides our standard perfume specialties, we can make up individual odors to suit your needs. It will cost you nothing to investigate the possibilities of these products. What are your problems?

SOAP SPECIALTIES
By Tombarel, Grasse, France

Resinoids

Tombarel Freres produce a complete line of resinoids, all very interesting bodies for soap perfume. Resinoids not only give character to soap odors, but also act as fixatives.

Lavender, Absolute
Oil Vetivert
Oil Geranium

also headquarters for

RHODINOL-S
IONONE SAVON
MUSCOGENE-S
LABDANUM CLARI-S
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LOS ANGELES
Telephone—TRinity 6894

Main Office
11 E. Austin Ave.
CHICAGO
Telephone—SUperior 1203

New York Office
114 East 25th St.
NEW YORK
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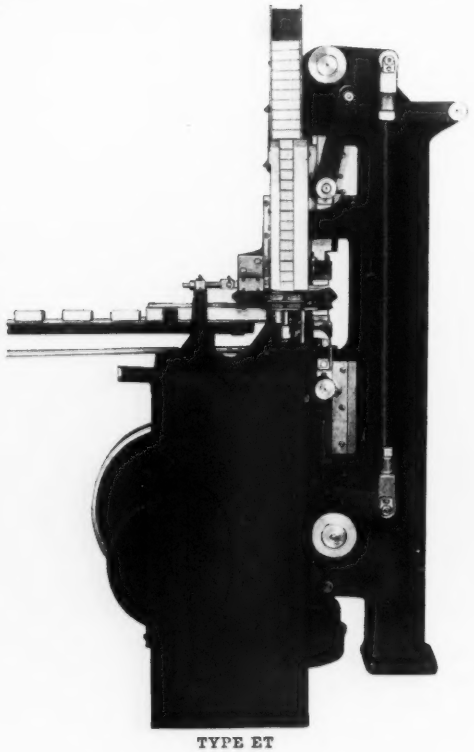
"BEAMAX"
DRIES TO A LUSTRE
LIQUID WAX
does not require polishing...
"BEAMAX" cuts floor maintenance costs by saving labor—no buffing is necessary on application, and no polishing is required.
"BEAMAX" is easily applied with a cotton mop or lamb's wool applicator. It smooths itself. It dries to a hard, lustrous finish in twenty minutes or less.
"BEAMAX" is long wearing. Finish is easily maintained by buffing; each cleaning increases the lustre. Floors can be washed with clear water without affecting the finish.
"BEAMAX" is recommended for all types of floors—this one wax takes care of linoleum, wood, tile, terrazzo, rubber, asphalt tile, mastic, etc.
"BEAMAX" will not show lap marks when used for "patching" worn spots. It has no odor.
"BEAMAX" is sold in drums, half-drums, and quarter-drums, as well as in 10-gal., 5-gal., and 1-gal. cans. It is a perfect emulsion and will not settle out.
Try "BEAMAX" for yourself. Send coupon for sample and prices.
THE DAVIES-YOUNG SOAP COMPANY
Dayton, Ohio
Copyright 1933 by The Davies-Young Soap Co.
The Davies-Young Soap Co.
Dayton, Ohio.
Please send me without charge sample can of "BEAMAX" Dries to a Lustre LIQUID WAX.
Name .....
Address .....
City .....

"We spare no expense to perfect the appearance as well as the quality of our soap. Woodbury's looks so much finer as it comes from your new ET Press that we are herewith ordering two more to replace earlier models still in good condition."

An Official of

The Andrew Jergens Co.



TYPE ET

Perfect pressing is done by our new Toggle-Operated Presses. Equally important is the fact that it is done without the use of a pressing lubricant so that no discoloration of the soap takes place later.

Replace your old ones with

JONES NEW TOGGLE PRESSES

R. A. JONES & CO., INC. P. O. BOX 485 CINCINNATI, OHIO

Our laundry and toilet soap presses are used almost exclusively by manufacturers, the world over, for pressing cakes of soap of every shape, size and quality. Write for catalogue.

SOAP

Volume Nine Number Eight

A SOAP INDUSTRY CODE

A CODE has been drawn up by the soap industry and submitted to Washington under the terms of the National Recovery Act. That it was drawn hastily and adopted at something akin to an emergency meeting in Chicago on August 15 is due solely to the demand of the Administration for immediate action by the industry. Well laid plans which called for sectional meetings in various parts of the country and then a final general meeting for adoption,—a procedure designed to give every soaper in the country a voice in the discussion if he wanted it,—had to be abandoned at the last minute because the Administrator of the Act insisted in no uncertain terms upon haste. The Association of American Soap and Glycerine Producers then called the general meeting for Chicago and opened its roster to membership of any soap maker in the country, no matter how small, by reducing the annual dues to ten dollars per year. That this prompt action for the benefit of the entire industry is to be commended, is to put it very mildly. Without it, there would undoubtedly have been hopeless confusion throughout the numerous groups of the trade.

Although there are still innumerable problems to be solved in the matter of trade practices, there will unquestionably be ample opportunity to solve them through supplements to the code. Hours of labor in the soap plant have been a bone of contention for some time past and will probably be for some time to come. It is our opinion, just in passing, however, that the day of the fifty-hour week or longer in the soap factory has become definitely a thing of the past. Most of the large soapers, and quite a number of the smaller ones, have been operating on a forty-hour week during recent times. In some other cases, however, the working week has varied all the way from thirty hours up to sixty in plants operating on approximately full schedule. The average of plants has probably been in the neighborhood of forty-four hours.

Although it has been held that the Administration in Washington would not agree to a forty-hour week in the soap trade inasmuch as it would give comparatively little increase in employment from present levels, it should be pointed out that in comparison to other industries, this is an eminently fair figure. By going to a thirty-six-hour week, the soap industry would go very materially beyond other industries in a comparable position. We hope that the Administration appreciates this fact fully.

Employment in the soap industry today is estimated at about 95 per cent of the normal average of the past six or eight years. In short, the industry as a whole is running on almost full employment schedules. A reduction to a forty-hour week in all plants running over this would undoubtedly put the figure above the normal 100 per cent level. A thirty-six-hour week would put it at what would be the highest level in the history of soap industry employment. In this connection, the point which we particularly want to make is

that the soap industry has *already* added far more than its share of employes and under the N. R. A. will undoubtedly stand well ahead of most other industries in this respect and in percentage of total employment.

As to membership in the Association of American Soap and Glycerine Producers, we urge every soaper in the country to join at once. The reduction in dues to a nominal figure permits this. We can also assure the small soaper that his interests will be guarded jealously, and that he will not be overshadowed by his larger competitors. It is an opportunity for him to make his voice heard which has never existed before.

—o—

IN the middle of August, few of us have many thoughts of Christmas. But if you are a manufacturer who is contemplating putting out a gift package or series of packages for the Christmas trade, now is the time to get under way. Dressing a useful article up in a Christmas package is admittedly one of the best methods of obtaining a seasonal increase in sales.

—o—

NOW it is a ten per cent tax on cosmetics in Ohio. Step by step, states and municipalities continue to pyramid taxes on top of Federal levies. The search for means of reducing government cost goes on with universal lack of success. It is so much easier to think up new taxes than it is to cut the wages of political job-holders who control votes.

—o—

BETWEEN *Lifebuoy Soap* of Lever and *Ivory* and *Kirk's Castile* of P & G, there goes on quite merrily, as we all know, a rather unique advertising feud. Lever opened with B. O. and P & G countered with M. O. We stood up quite well under this advertising bombardment because we had been advised over the grape vine that these campaigns were selling soap,—and in the last analysis, the chief object in manufacturing soap is to sell it. Then along came *Printer's Ink* and got dramatic about the whole thing. They pictured Mr. Lifebuoy remarking to Mr. P & G: "Challenges accepted! And our chemists can lick your chemists!" This was too much,—we opened the window and yelled for help.

SOAP manufacturers on the whole made more money during the first half of 1933 than they did during either half of 1932. To some extent, this may be due to a turn about in raw material prices. Declining material markets played havoc with profit and loss statements in 1932. With the trend reversed last spring, there was an opportunity to cash in to some extent on low cost materials on hand. However, expanded operations for the past few months, with heavier soap shipments at higher prices, have unquestionably accounted for the bulk of improvement. As we pass mid-summer, a tapering off in business to some extent is reported. It is interesting to note, however, that the ready price cutting of a year ago is at present far less conspicuous.

—o—

UNDER the N. R. A. codes adopted by the periodical and newspaper publishers, we wonder how many really sincere efforts will be made to throw out advertising which subtly misrepresents and misleads. With all due respect for the efforts of the Advertising Review Committee and the National Better Business Bureau, no great progress is going to be made until the big national advertisers quit vieing with each other in publishing misleading and ridiculous bunk. A little plain honesty and sincerity is needed more than rules and regulations.

—o—

GLYCERIN has not been a particularly live item during the past several years. A survey of the situation by *Soap* seems to show that glycerin has suffered considerably from competition, insufficient outlets, and other ills. Some products, notably chlorine, have been helped materially of late by cooperative efforts in both sales and technical research. We wonder if a Glycerin Institute, formed for this purpose perhaps as a subsidiary of the Glycerine Producers' Association, might accomplish something in the way of opening up new sales outlets.

—o—

THE fall in the value of the American dollar has acted as a very successful barrier in keeping imports of foreign glycerin from the American market. At present prices and present rates of exchange, the importation of glycerin is not a very profitable business.

Soap Industry Adopts a Code

At General Meeting August 15 in Chicago Under Auspices of American Soap and Glycerine Producers

CHICAGO, Aug. 15. — A meeting of soap manufacturers, held here today and attended by representatives of 100 leading firms from all parts of the country, unanimously adopted a tentative soap industry code under the N.R.A. for submission to Washington after a few incidental changes to be made by the board of the Association of American Soap and Glycerine Producers, under whose auspices the meeting was held. The code calls for a 40-hour week, averaged over six months, with a 45-hour maximum in any one week, a minimum wage rate of 40c per hour and 30c for light labor on packaging and filling.

The Association of American Soap and Glycerine Producers is reorganized with two classes of membership: (A) active members with dues of $10.00 yearly and (B) contributing active members to pay larger dues, each group majority to have veto power on any association activity. Product groups, such as Private Brand, Potash and Liquid Soap, Textile and Industrial Soap, Soap Powders and Cleansers, etc., are being organized as sections to consider trade practices.

The full board of the Association now consists of: R. R. Deupree of Procter & Gamble Co., N. N. Dalton of Colgate-Palmolive-Peet Co., F. A. Countway of Lever Bros. Co., R. M. Johnston of Swift & Co., Dr. J. S. Goldbaum of Fels & Co., F. H. Merrill of Los Angeles Soap Co., N. S. Dahl of John T. Stanley Co., George Eastwood of Armour & Co., C. F. Young of Davies-Young Soap Co., I. Katz of J. Eavenson & Sons, H. D. Banta of Iowa Soap Co. and W. C. Wollen of Olive Oil Soap Co.

AT a general emergency meeting of all branches of the American soap industry, held at the Blackstone Hotel, Chicago, on August 15th, a blanket code was adopted for the industry under the terms of the National Recovery Act. The meeting was held under the auspices of the Association of American Soap and Glycerine Producers. It had previously been planned by Roscoe C. Edlund, general manager of that Association, to hold various sectional meetings throughout the country of the various soap trade groups, to organize geographical and product sections, and to form from these groups an altogether new association which would meet to ratify a code about September first. The plan was laid before Gen. C. C. Williams, Administrator in charge of the soap industry for the N. R. A., but was vetoed by him with a demand for speed and immediate action by the soap industry on its code. The calling of the emergency general meeting followed this demand by General Williams. The Association of American Soap and Glycerine Producers acted for the industry and also opened its doors to membership by all soapers by reducing its annual dues to ten dollars.

At the meeting, the following code was adopted with such revisions as have been enumerated, for submission to the National Recovery Administrator:

Code of Fair Competition for the Soap and Glycerine Industry

TO cooperate with the President of the United States in making effective the policy of Title I of the National Industrial Recovery Act, the following provisions are established as a National Industrial Recovery Code for the Soap and Glycerine Industry:

Definitions

I. (a) This Code applies to manufacturers of soap, soap products, and glycerine in Continental United States. This definition shall not, however, bar supplemental codes or agreements, when submitted by the Planning and Fair Practice Agency or Agencies set up in this Code, from applying to distributing, or manufacturing, and or other factors in the soap and/or related detergent or cleanser industries, in Continental United States and/or elsewhere as may be specified.

(b) The term "manufacturer" as used herein shall mean any natural person, partnership, association, or corporation engaged in the manufacture of soap, soap products, and glycerine. The term "employer" shall mean any manufacturer who employs one or more persons. The term "employee" shall mean any person so employed.

(c) The term "Association" as used herein shall mean the Association of American Soap and Glycerine Producers, Inc., a membership corporation not for profit organized and existing under the laws of the State of Delaware. The term "Board of Directors" shall mean the Board of Directors of the said Association.

(d) The term "Act" or "Title" as used herein shall mean Title I of the National Industrial Recovery Act. The term "President" shall mean the President of the United States.

(e) The term "effective date" as used herein shall mean the first Monday ten days or more after this code shall have been approved by the President.

Provisions Required by the Act

II. As Required by Section 7 (a) of Title I of the National Industrial Recovery Act, the following provisions are conditions of this code: "(1) That employees shall have the right to organize and bargain collectively through representatives of their own choosing, and shall be free from the interference, restraint, or coercion of employers of labor, or their agents, in the designation of such representatives or in self-organization or in other concerted activities for the purpose of collective bargaining or other mutual aid or protection; (2) that no employee and no one seeking employment shall be required as a condition of employment to join any company union or to refrain from joining, organizing or assisting a labor organization of his own choosing; and (3) that employers shall comply with the maximum hours of labor, minimum rates of pay, and other conditions of employment, approved or prescribed by the President."

III. As required by Section 10 (b) of the Act, the following provision is a condition of this Code:

"The President may from time to time cancel or modify any order, approval, license, rule, or regulation issued under this Title"; and this Code hereby expressly recognizes such power of the President with reference to his approval of this Code or any conditions imposed by him upon his approval thereof.

No Employment Under 16 Years of Age

IV. On and after the effective date, no manufacturer shall employ any person under 16 years of age.

Not Over 40 Hours for Office Workers

V. On and after the effective date, no manufacturer shall work any accounting, clerical, office, service, or sales employee (except outside salesmen) in any store, office, department, or establishment, or on any automotive or horse-drawn express, delivery, or freight service, or in any other place or manner, for more than an average of 40 hours a week in any one month, or for more than 45 hours in any one week.

Not Over 40 Hours for Factory Workers, etc.

VI. On and after the effective date, no manufacturer shall employ any factory or mechanical worker or artisan an average, on a six months' basis, of more than 40 hours a week, or more than 8 hours in any one day except as hereinafter provided, or more than 45 hours in any one week. If any employee on an hourly rate works in excess of 8 hours in any one day the wage paid will be at the rate of not less than 1 1/3 times the regular hourly rate. Watchmen, engineers, firemen, water tenders, or oilers shall not be employed more than 48 hours per week.

Necessary Exceptions

VII. The maximum hours fixed in the foregoing paragraphs V and VI shall not apply to professional persons employed in their professional capacity; nor to employees in a managerial or executive capacity, who receive $35 or more per week; nor to employees on emergency maintenance and repair work and special cases where restrictions of hours of highly skilled workers in continuous processes would unavoidably reduce production, but in any such case, at least time and one-third shall be paid for hours worked in excess of the maximum.

Minimum Wages for Office Workers, etc.

VIII. On and after the effective date, no manufacturer shall pay any of the classes of employees mentioned in paragraph V less than $15 per week in any city of over 500,000 population, or in the immediate trade area of such city; nor less than $14.50 per week in any city of between 250,000 and 500,000 population, or in the immediate trade area of such city; nor less than $14 per week in any city of between 2,500 and 250,000 population, or in the immediate trade area of such city; and in towns of less than 2,500 population each manufacturer shall increase all wages by not less than 20 per cent above the rate paid on July 1, 1933, provided that this shall not require wages in excess of $12 per week.

Minimum Wages for Factory Workers, etc.

IX. On and after the effective date, no manufacturer shall pay any employee of the classes mentioned in paragraph VI, except as hereinafter specified, less than 40c per hour. Watchmen shall be paid not less than 33 1/3 cents per hour. Light labor engaged in wrapping, packaging, and filling shall be paid not less than the hourly rate for the same class of work on July 15, 1929, but in no event less than 30c per hour. Casual and incidental labor, and learners for not to exceed three months, may be paid at a rate not less than 80 per cent of the minimum wages fixed in this code, but the total number of such employees in any one company shall not exceed 10 per cent of the total number of employees of that company.

Compensation for Employment in Excess of Minimum Wages

X. On and after the effective date, no manufacturer shall reduce the compensation for employment now in excess of the minimum wages stated in this Code (notwithstanding that the hours worked in such employment may be hereby reduced), and each manufacturer shall make an equitable readjustment of all pay schedules.

Intent Is to Shorten Hours and Raise Wages

XI. No manufacturer shall use any subterfuge to frustrate the spirit and intent of this Code which is, among other things, to cooperate with the President in increasing employment by a universal covenant, removing obstructions to commerce, shortening hours, and raising wages.

Setting Up a Planning and Fair Practice Agency

XII. To further effectuate the policies of the Act, the Board of Directors of the Association is set up to cooperate with the President as a Planning and Fair Practice Agency for the Soap and Glycerine Industry, and the President is invited to name three members to sit with this agency without vote whenever it shall act in the capacity herein indicated. This Agency shall take the lead in making effective in the Soap and Glycerine industry all provisions of this Code, and may serve in developing for all branches of the Soap and Glycerine industry and/or related detergent, or cleanser industries supplemental agreements to be submitted from time to time for the approval of the President. "Product divisions or geographical sections of the Association may establish their own Planning and Fair Practice Agencies and each such agency, subject to proper review by the Board of Directors, shall be self-governing in respect of all conditions and problems relating exclusively to said division or section, provided however that the three representatives of the President upon the Planning and Fair Practice Agency of the industry or other similar representative of the President shall be invited to meet regularly with any such divisional or sectional Agency, and provided further that no supplemental agreements, codes, or other action of any such Agency shall be inconsistent with the purposes and policies of the Association, of the Act, or of this Code."

No Sales Below Cost

XIII. To accomplish the purposes of the Act and of this Code it shall be an unfair method of competition to sell below cost. Under direction of the Planning and Fair Practice Agencies or Agencies constituted above (Article XII) studies shall be made of costs in an effort to determine fair and uniform procedures for the soap and glycerine industry and/or related detergent or cleanser industries.

Reports

XIV. To aid the Planning and Fair Practice Agency or agencies in making effective the purposes of this Code and the policies declared in the Act, every manufacturer shall supply promptly to such agent as may be designated reports and other data pertinent to the Act and this Code.

Modifications May Be Made

XV. Such of the provisions of this Code as are not required to be included therein by the National Industrial Recovery Act may, with the approval of the President, be modified or eliminated if it appears that the public needs are not being served thereby and as changes in circumstances or experience may indicate. They shall remain in effect unless and until so modified or eliminated or until the expiration of the Act. It is contemplated that from time to time supplementary provisions to this Code or additional codes will be submitted for the approval of the President, to prevent unfair competition in price and other unfair and destructive competitive practices and to effectuate the other purposes and policies of Title I of the National Industrial Recovery Act and which shall not conflict with provisions hereof.

Force and Effect of Code Provisions.

XVI. If any provision of this Code is declared invalid or unenforceable, the remaining provisions shall nevertheless continue in full force and effect the same as if they had been separately presented for approval and approved by the President.

Application

XVII. If any employer in the soap and glycerine industry is also an employer in any other industry, the provisions of this code shall apply to and affect only that portion of his business which is included in this industry.

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Plans calling for the construction of a small whale oil refinery at Churchill, Manitoba, Canada, are under contemplation by the Industrial Development Board of Manitoba which last summer brought in several white whales from Hudson Bay for test rendering. It is believed that sufficient whales may be found in Hudson Bay to build up a Canadian whaling industry.

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Exports of Java citronella oil from Java totaled 88 tons during the month of June. May exports were 111 tons, rather than 162 tons, as reported previously.

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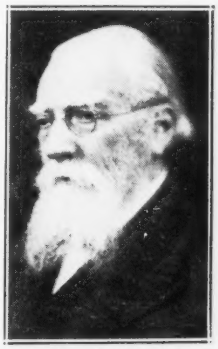
O. A. Pickett has been named acting director of the Hercules experiment station of Hercules Powder Co., following the resignation of Harry E. Kaiser.

—o—

Continental Can Co., New York, has appointed Batten, Barton, Durstine & Osborn, Inc., as its advertising agent.

I. Rokeach Dies at 92

Israel Rokeach, founder and president of I. Rokeach & Sons, Inc., Brooklyn, and manufacturer of the first kosher soap made in America, died August 11 in the Jewish Hospital of Brooklyn after a short illness. Mr. Rokeach was ninety-two years old. He came to the United States from Russia in 1890 and shortly after his arrival started a soap business on the lower East Side of Manhattan. The business expanded steadily, and the culmination of its growth came in 1929 when the firm moved into a new million dollar plant at 219 Wythe Ave., Brooklyn.



Israel Rokeach

During the last few years Mr. Rokeach has devoted a great deal of time, energy and money to Jewish philanthropies, among these being the Jewish National Fund for the Upbuilding of Palestine, the Brooklyn Federation of Jewish Charities and Yeshiva College. One of the new communities built near Palestine by the Palestine Fund is named for Mr. Rokeach. Beth Moses Hospital was founded in Brooklyn with his aid. Mr. Rokeach is survived by two sons and three daughters, Dr. Aaron Rokeach, Dr. Louis Rokeach, Mrs. Selma Kamaiky, Mrs. Luba Gamson and Dr. Fanny Rokeach. His wife died a number of years ago.

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Nigerian Palm Oil Exports Decline

An increase in the volume of import and export trade is shown in the official report on the trade of Nigeria for the year ending December 31 last, just issued in London. One of the few exports to decrease in quantity was palm oil, the amount of which fell by 2,380 tons and the value by £27,371 ($136,855). On the other hand, the figure of 347,690 tons of exported palm kernels is the highest ever recorded by Nigeria for this commodity. This increase of 61,432 tons over the 1931 figure is regarded as one of the most encouraging features of the year's trading. The increased value is given as £563,617 ($2,818,085). These figures point to a substantial increase in palm oil expressing abroad.

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A concern in La Paz, Bolivia, has started production of toothpaste, with an output of 85,000 tubes a month. Materials and equipment are being obtained from Germany.

—o—

Dr. E. L. Maines, formerly with Strong, Cobb & Co., Cleveland, has formed the E. L. Maines Co. in Cleveland to engage in private formula manufacturing. Offices are maintained at 1514 Prospect Ave.

When you wash your hands, you bring into play a whole line of materials and manufacturing processes; an "industrial background" is summed up in each of the objects involved . . . the soap, the towel, the rubber stopper, the porcelain bowl, the metal fixtures, even the chemically treated water. At American Cyanamid & Chemical Corporation, we are busy building this background. The ingredients we make and sell have a part in practically every industry, and so in practically every daily activity.

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What Future for Glycerin?

(Part II)

SOME of the disabilities under which the glycerin industry is operating at the present time have been described. The question now arises, is there a remedy? Can the glycerin industry overcome the influences that are holding down the price and that are undermining the use of glycerin for various purposes? How can glycerin successfully combat competition with higher-priced substitutes like ethyleneglycol and lower-priced substitutes like corn syrup, honey, invert sugar and the like?

One measure has been suggested, that new derivatives of glycerin should be developed and new uses found for these derivatives. This would certainly help increase the consumption of glycerin. Some interesting products have been developed, which will be described later. However, just this alone will not solve the problem. The glycerin industry might follow the example of the chlorine industry and the iodine industry and others, who were confronted with similar difficulties and who have been more or less successful in overcoming them. The glycerin industry can in fact have no better example to emulate than the methods of its chief competitor, ethyleneglycol.

There must be formed an organization for research, not only on new uses of glycerin and new derivatives but also on the problems of glycerin users. The chlorine industry, confronted with a very similar situation as exists in the glycerin industry (since chlorine is produced simultaneously with sodium hydroxide by the electrolytic process while the consumption of chlorine lagged considerably behind that of sodium hydroxide) formed an institute to work up new uses for its product and aid the user in getting better results in operations involving the use of chlorine. The iodine industry woke up rather late in the day to realize that its business was slipping away rapidly and formed likewise an institute for furthering the use of iodine. The makers of ethyleneglycol appreciated that their product was high-priced and hence had to be sold on a quality-service basis. They could not sell ethyleneglycol like glycerin, because it was entirely strange to the buyer. They knew that his natural reaction would be, why should I use ethyleneglycol—what good is it to me? So, they did not sell him the product. They sold him service. They investigated his technical problems and solved them gratis. They proved to him that ethyleneglycol, while higher priced than some competing products, could give better results, did not have to be used in such large proportions, and simplified some manufacturing operations.

Glycerin has many uses and most of these are merely physical compounding, that is the glycerin as such forms a part of the finished composition, whether this is a cosmetic, a leather dressing or what not. Also, when glycerin is used alone in treating products, tobacco for example, its action is generally solely physical. The consumers of a commodity for such purposes generally have little technical knowledge of the substance that they use. They rely for their information usually on the sellers of the product. If they make a mistake, they are apt to shift the blame to these sellers. They are always looking for substitutes and often find them, especially when prices are high. There is just one sure way of keeping such business and that is to tie them up with the silken strands of service. If glycerin solves their problem, they will swear by glycerin. If it does not, they will swear at it.

Let us cite an example, one that must still be upmost in the minds of glycerin makers. Glycerin has been sold for many years to the textile printing industry. It forms an important ingredient of the printing paste. All that the glycerin people knew about this application was that the textile printers bought the product and appeared to be satisfied with it. The industry woke up one fine day to find that the textile printers were not going to buy so much glycerin as before. They had found out that they were using considerably more glycerin in the printing paste than was necessary. The point is that the glycerin industry should have found this out before its textile customers. Only a slight flight of the imagination is required to conceive the effect this would have had on the textile printers.

Then again there is the much-discussed example of antifreeze. Glycerin is a good antifreeze, but it cannot prevent water from freezing in the radiator of an automobile if it is not present in a definite minimum proportion. Glycerin sales for antifreeze purposes have been stimulated and advanced by the industry, but irresponsible manufacturers of automobile supplies have purchased glycerin and used it to make antifreeze compositions which froze in the radiators. Due to ignorance or cupidity, they simply did not use sufficient glycerin in their compositions. Water was much cheaper! The owner whose car froze damned glycerin and would not use it again if he got it gratis.

Of course glycerin consumption will increase and glycerin will go up in price to a certain extent as soon as the dynamite business gets back to something like normal. Antifreeze will always account for a good consump-

tion of glycerin, but the competition in the field with cheaper alcohol and more expensive ethyleneglycol is likely to prevent any large increase in glycerin use for this purpose. Both the tobacco and the cellophane industries use considerable glycerin and as conditions improve in those industries, the consumption should increase. But new uses will have to be found for glycerin, new derivatives developed and research sales-service rendered, to improve materially the basic position of the industry.

A DISCUSSION of glycerin problems would not be complete without a description of the uses, derivatives and substitutes for glycerin. A large number of organic and inorganic substances have been proposed as substitutes for glycerin. They were principally developed during the war and come into the picture only when glycerin prices are high. Glycerin substitutes for medicinal and cosmetic purpose include sodium and potassium lactate, magnesium butyrate, dicresyl carbonate, glucose, erythrin (a seaweed extract), a mixture of calcium chloride, potassium lactate and a vegetable gum, raw sugar, invert sugar, honey, mucilaginous mixtures containing agaragar, mosses, gelatin, isinglass, algin or alginic acid, molasses mixed with phosphoric acid, etc., etc. The point is that while all these substances are much inferior to glycerin, nevertheless undue increase in the price of glycerin will find users turning to these products, unless the service that they receive with their glycerin purchases convinces them that it is more economical in the long run to use the more expensive product.

Some of the new derivatives of glycerin are very interesting. A number of esters of organic acids have been developed. Thus, glycerin monolactate is described in British Patent No. 319,736 as useful for treating bottle capsules. It may be mentioned here that many glyceryl esters are possible, particularly in that glycerin is a triatomic alcohol and can therefore combine with one, two or three molecules of acids. Thus, glyceryl dilactate and trilactate are possible as well as monolactate. Furthermore, glycerin can combine with more than one acid, or with an acid and alkyl, aryl and other radicals. Thus, glyceryl-butyl phthalate has been prepared and is recommended as an ingredient of lacquers, varnishes, dopes and enamels, being added for the purpose of increasing the resistance of the cellulose ester to light. Many glyceryl esters are plasticizers and softeners in making cellulose ester and ether lacquers. Glyceryl monoformate is useful for this purpose and is also an ingredient of toothpastes for use in the removal of tooth film. Both glycerin monoacetate and mono-oxalate are used as plasticizers for lacquers, ingredients of resin compositions and as solubilizing and dispersing agents in dyeing and printing textile yarns and fabrics. Glyceryl tricarbonate has the same uses.

Various ethers and eryl and alkyl derivatives have been made from glycerin. These products are described in British Patent No. 350,379. They are very interesting as they have many uses. They are plasticizers for lacquers and coating compositions, containing various cellulose esters or ethers, such as cellulose acetate, nitrocellulose, cellulose butyrate, benzylcellulose and the like. They are also useful as dispersing agents in making emulsions. They emulsify chemicals, such as alcohols, phenols, terpenes and form wetting compositions for use in the textile industry when mixed with soaps, fats, fatty acids, sulfonated oils, various chemicals, etc. They are used in making emulsified disinfectants and germicides, emulsified color lakes and dyestuffs, emulsions of fats and oils. They are found in emulsified writing and printing inks, emulsified lubricating and greasing compositions, emulsified insecticides containing tar oils, tars, essential oils, phenols, etc. Compositions for softening and dressing leather are made with their aid as well as emulsified automobile polishes, cleansing compositions for painted and varnished surfaces, furniture polishes, metal polishes, scouring compositions. Various sizing compositions contain these derivatives and are used in the paper industry as well as for textile purposes. They are used in making emulsified cosmetics and essential oils, emulsions of petroleum and petroleum distillates, emulsified resins and waxes, rubber emulsions, detergent compositions containing tetralin and turkey red oil. They have many uses in the textile industry, such as dyeing, washing, sizing, fulling, carbonizing, degreasing raw wool, mercerizing, printing, silk-soaking, etc. In each of these uses, they promote the dispersion of the bath. Examples of these derivatives include monotolylglycerin, monophenylglycerin, xylenyl glycerin ether, etc.

OTHER interesting glycerin derivatives are chlorohydrins, made by the action of hydrochloric acid in the presence of catalysts. The include glycerin mono-, di-, and epi-chlorohydrins. According to British Patent No. 343,031, glycerin dichlorohydrin is a solvent for artificial resins of the aldehyde-amine type. The chlorochydrins are also used to dissolve natural gums and in the manufacture of explosives. The chlorohydrins are also used as starting points in making various glyceryl ethers, such as monomethy, monoethyl, dimethyl, trimethyl, di-isopropyl, etc. These ethers possess remarkable solvent properties.

In Chemistry and Industry, page 375, April 29, 1932 is described certain new glycerin derivatives, namely epiethylin, epiphenylin and the mono- and di-phenyl ethers of glycerin. These products have interesting applications. Epiethylin is a good solvent for shellac, copals, coumarons resins, and natural and artificial gums. It may also be used as a substitute for camphor in the preparation of plastics. Durable celluloid-like sheets have been made by mixing collodion cotton with 25 per cent of its weight of epiethylin. Films produced from cellulose nitrate lacquers containing epiethylin are very stable. Epiethylin can be converted into amino-ethers,

the phenylurethane derivatives possessing anaesthetic properties.

Epiphenylin is an excellent solvent for shellac, gums, resins, nitro-cellulose of all viscosities and for the newer cellulose product, benzyl-cellulose. It is a valuable constituent of high grade lacquers, acting as a water-resister and blender for the more difficultly soluble ingredients. It is also useful in making celluloid. Glycerol monophenyl ether can be used in place of tricresyl phosphate in lacquers, and camphor in plastics. Nitrating agents give explosive compounds which are more stable than picric acid. Glycerol diphenyl ether can act as a plasticizing agent in the manufacture of lacquers, and can replace camphor in making plastics with high viscosity nitrocellulose. Films produced with such lacquers have good weathering properties and are very stable. Urethane- and nitrated-derivatives of glycerol diphenyl ether have been used in medicine and as explosives respectively.

Ester gums of the glycerin type are also interesting derivatives. These products are useful in making varnishes and lacquers. They replace fossil gums, which are gradually disappearing due to their much slower formation than consumption.

IT has been stated that the uses of glycerin itself are many. Only when this subject is studied intensively, the great possibilities of glycerin are realized. First, with respect to chemically pure glycerin, its most important application is in drug manufacture. Glycerin is an antiseptic and a powerful solvent. It is more destructive to bacteria than to tissue cells. It is used in treating diabetes, catarrh, colics and constipation. In compounding medicines, it is an excellent sunburn lotion. Chapped hands, chilblains and eczema are successfully treated with glycerin. It is used as a solvent in preparing tinctures and as an ingredient of pills and dragges. Its sweet taste makes it useful in compounding medicines to hide the disagreeable taste of ingredients, particular ferric chloride, cascara sagrada and cinchona.

Chemically pure glycerin is used for various cosmetic purposes. It is found in vanishing creams, skin creams, almond creams, buttermilk lotions, liquid face powders, glycerin jellies, lip jellies, greaseless lipsticks, cuticle removers, nail bleaches and nail polishes. The proportion of glycerin varies between 10 to 75 per cent. Dentifricial pastes contain from 20 to 45 per cent of glycerin. It keeps the past from drying out and is a vehicle for the antiseptic and solid ingredients.

Some of the chemical uses of glycerin have been described under new derivatives. Chemically pure glycerin is used in the manufacture of glycerophosphates. It is a solvent for many chemicals, such as thymol, phenol, boric acid, benzoic acid, etc. It has many uses in synthetic chemistry, such as the production of quinolin and isoquinolin. Allyl alcohol is obtained by reducing glycerin with formic or oxalic acid.

Many uses are found for pure glycerin in the food industry. Due to its hygroscopic, antiseptic and saccharic properties, it is used as an ingredient of child and invalid foods. Glycerin increases the water absorptive properties of gluten in bread without fermentation. It is a preservative and keeps standard the moisture content of foods, such as grains. It retards drying and mold formation in cake making and improves the finished appearance of cake. Glycerin is used as a sweetening and moistening agent in making chocolate, sweetmeats, aerated waters, for sterelizing shelled eggs (see British Patent No. 325,045 for further details), mustard preparations and meat foods, in confectionery, jellies, chewing gum, cordials, liqueurs, wines, beers, for artificial ageing of new whiskey. It improves the palatability of rough, sour-tasting wines. Glycerin solutions are claimed to be superior to borates, salicylates and benzoates for preserving meats, fish, etc.

INDUSTRIALLY, glycerin has a great many uses. Its uses as an antifreeze, for making nitroglycerin and to maintain tobacco in suitably moist condition and retard mold formation are too well-known to require any further discussion. Its application as a softening agent in the manufacture of cellophane is comparatively new and has helped considerably to maintain consumption during the business depression. Glycerin is also used as a refrigerating brine. It is non-corrosive, which is a highly important advantage and results in economies of plant construction. Glycerin is also used as an antifreeze in exposed hydraulic systems.

Glycerin has been proposed for use in drying manufactured gas. This is a rather new development in the gas industry. Glycerin is non-corrosive and does not precipitate solids on concentration. The loss of glycerin by entrainment in the gas is less than 0.25 per cent. The removal of the moisture from the gas improves its thermal power. Glycerin has also been proposed as an anti-freeze in gas meters to prevent freezing of condensed moisture.

A general use of glycerin as such or in aqueous solution is for quenching steel and steel alloys. The physical and chemical properties of glycerin are favorable for this purpose. It does not react chemically under the conditions of quenching and can be easily removed from the quenched steel by washing with water. The cooling effect of glycerin solutions is far more rapid than that of oils. This is particularly advantageous in quenching tool steels. Glycerin is also used for making facing mixtures for sand foundry molds.

Glycerin is used as a starting point in making synthetic resins. These resins are used for making electrical parts and are particularly advantageous in preparing composite mica plates, lacquers, molded articles in general. They are very adhesive to smooth surfaces, such as glass and porcelain. Laminated materials can be

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TERPINEOL

By Dr. Eric C. Kunz
Givaudan-Delawanna, Inc.

THE popularity of terpineol as a perfuming material has stood the test of time. Its pleasant odor, its stability, its low cost and ready availability in large quantities have accounted to a great extent for the growing popularity of the product over a period of years. As an ingredient of soap perfumes, it has long had a wide use. In recent years, its consumption in liquid insecticides, polishes, paste, inks, deodorizing sprays, and other sanitary products has brought about a steady expansion in demand. With methyl salicylate, the sassafras group, rosemary, thyme, spike, anise and citronella, this synthetic has taken its place prominently in the field of lower cost perfuming agents. The American market is being supplied today by one domestic manufacturer and two or three importers of German brands.

As early as 1855, Berthelot discovered that terpin hydrate crystals when subjected to the action of dilute acids are changed into an oil with a pleasant aromatic odor. For a long time, neither he, nor his successors, could discover the exact nature of this product and the most contradictory ideas regarding it were expressed in the literature. It was not until 1878 that Tilden recognized the complex nature of terpineol. Again, almost ten years passed before Wallach, during his epoch-making investigations in the chemistry of terpenes, isolated the alcohols and hydrocarbons contained in this mysterious product with the pleasant odor and gave the name terpineol to the isolated alcohols. Based on these discoveries of Wallach, the first commercial terpineol appeared on the market in 1890. In the United States, terpineol was manufactured as early as 1908 by the Standard Chemical Company. The process developed by this latter firm is still the one in use today at the American plant, although it has, of course, been constantly improved and refined over the years.

All terpineol is manufactured from terpin hydrate by the action of dilute acids. This latter is a beautiful chystalline substance, white in color and having a melting point of 117 deg. Centigrade. Terpin hydrate in turn is manufactured from either pine oil or turpentine by treatment with sulfuric or other acids.

Formerly the greatest difficulty lay in obtaining the mixture of acids with the turpentine, which was effected by the addition of alcohol, the solution then being subjected to long standing in flat dishes. Later on, when larger production became essential, contact between the acid and the turpentine was obtained by adding sawdust which absorbed both the oil and the acid. This mixture was then kept in big tanks for a month or longer. This crude and troublesome way of obtaining the terpin hydrate has long since been abandoned and by present perfected production methods, the time of manufacture has been reduced to a matter of days. The crystals of terpin hydrate so obtained are now heated with phosphoric or a similar acid until they are completely liquefied. The crude terpineol so produced contains foreign materials which are removed by a series of very painstaking fractional distillations in vacuum. A special apparatus of intricate design is employed in order to obtain this thorough separation. After a number of such fractionations, there results pure terpineol, which is a water white oil of a specific gravity of .035 to .940 at 15° C. and has a boiling point of 215 to 20° C. when free from water.

TERPINEOL occurs naturally in certain essential oils, including linaloe, geranium, bergamot, petit grain, neroli, and gardenia. Terpineol itself has a lilac character and is much used as a base for lilac odors. Common blended lilacs consist about half of terpineol with hydroxycitronellal, phenylethyl alcohol, ylang ylang, musk ambrette, and others according to character. Terpineol blends well with almost any essential oil or synthetic. In this connection it is interesting to note that Poucher states: "By far the largest proportion of terpineol enters the soap industry, and many are the tablets of toilet soap which do not contain any other perfume than this alcohol. The art lies in being able to employ it as a base on which to build fanciful odors. It blends well with almost any essential oil or synthetic."

A good terpineol should have a very delicate, pleasant odor recalling that of fresh lilac and must be entirely free from harsh notes which are imparted by light hydrocarbons and by resinous materials contained in every crude terpineol. The latter can be removed only when the most scientific manufacturing and refining methods are employed.

Terpineol has endeared itself to the manufacturer of perfumes and soaps, not only because of its moderate price but because of its own remarkable properties. It not only mixes with every other odoriferous material in any proportion, as noted before, but has excellent solvent properties for many materials that are difficult to dissolve, such as musk. It is only slightly volatile and therefore resists heat better than many other aromatic

(*Turn to Page* 53)

New Products

New double-tier counter display for Creco Vegetable Oil Shampoo of the Creco Co., Long Island City. Display designed and manufactured by Einson-Freeman Co.

Two new emulsion polishes and packages by Standard Oil Company of New York. Socony Auto Polish is pink, the Furniture Polish white. Colsure is red screw cap by Anchor. Bottle by Hazel-Atlas.

Pinaud's new shaving cream,—the latest addition to the well-known line. Also their new imported bitter almond toilet soap, individually wrapped in cellulose.

and Packages

Shoe cleaner in novel applicator package. The moulded closure of Durez is removed and it is ready for use. Manufactured by Clark-Dunn Co. of St. Louis.

Liqui-swat, the household insecticide of the Calumet Refining Company of Chicago makes its bow to the American market.

New four-ounce Deodorette Cakes by Clifton Chemical of New York packaged in twelve inch fibre tubes of bright Chinese red and gold. Individually wrapped in cellophane.

Barene, a new product of Barium Products, Ltd., San Francisco, makes its appearance in an attractive amber glass bottle and counter display. Container by Owens - Illinois Pacific Coast subsidiary.

Guard Against

DETERIORATION

Soaps are judged primarily by their odors. If the perfume deteriorates, the soaps are made unsaleable.

USE *FRITZSCHE SOAP PERFUMES*

Our special soap perfumes are not permitted out of our plant unless they have been proven in our miniature soap factory set up as a testing laboratory. They must retain their vitality and potency even after a long period on the shelves. Deterioration and discoloration are reduced to a minimum.

Why take a chance with inferior untried perfumes when Fritzsche Brothers assure you the maximum of satisfaction.

Our research department will be glad to pass on to you the data gathered over many years of experimentation. Samples too, will be sent on request.

FRITZSCHE BROTHERS, INC.

Proprietors of
PARFUMERIES DE SEILLANS
Seillans, France

78-84 BEEKMAN ST., NEW YORK, N. Y.

Sole Agents in the U. S. and Canada for
SCHIMMEL & COMPANY
Miltitz (near Leipzig) Germany

Big Retailing Project Planned by Soap Magnate

One of the best-known men in the British soap industry is A. E. Whitelaw, who heads Fleming & Whitelaw, Ltd., and who recently returned to London after a visit to his native Australia, where he called a meeting of manufacturers to consider a scheme for marketing Australian goods in Europe.

In marketing his own Preservene Soap, Mr. Whitelaw has had unusual success, having made it second favorite among nearly 90 laundry soaps competing in the United Kingdom market. The essence of the scheme Mr. Whitelaw put before his fellow manufacturers was the formation of a group of Australian manufacturers, each of them to become responsible for $25,000.

The idea is to start off by appointing 5,000 grocers distributed throughout the United Kingdom to handle the goods, which they would be encouraged to do by the fact that a letter and a sample of the goods had been previously sent to a million private homes in Britain, and that for the first year they would be supplied on sale or return, with the extra inducement of letting the grocers selling them have half the benefit of the 25 per cent exchange on sterling in addition to the ordinary trade profit. The meeting inaugurating the scheme was presided over by William M. Hughes, former Premier of Australia.

N. J. Health Officers Meet at C-P-P Plant

The annual meeting of the New Jersey Health Officers Association was held recently at the Jersey City plant of Colgate-Palmolive-Peet Co. Following an inspection of the plant in the morning the officials were guests of the company at luncheon. Henry Colgate addressed the group, outlining the history of the Colgate family in the soap industry. Dr. Martin H. Ittner also spoke on soap and toilet preparations in their relation to public health.

—o—

Erwin, Wasey & Co., New York, have been placed in charge of advertising of Bost, Inc.

—o—

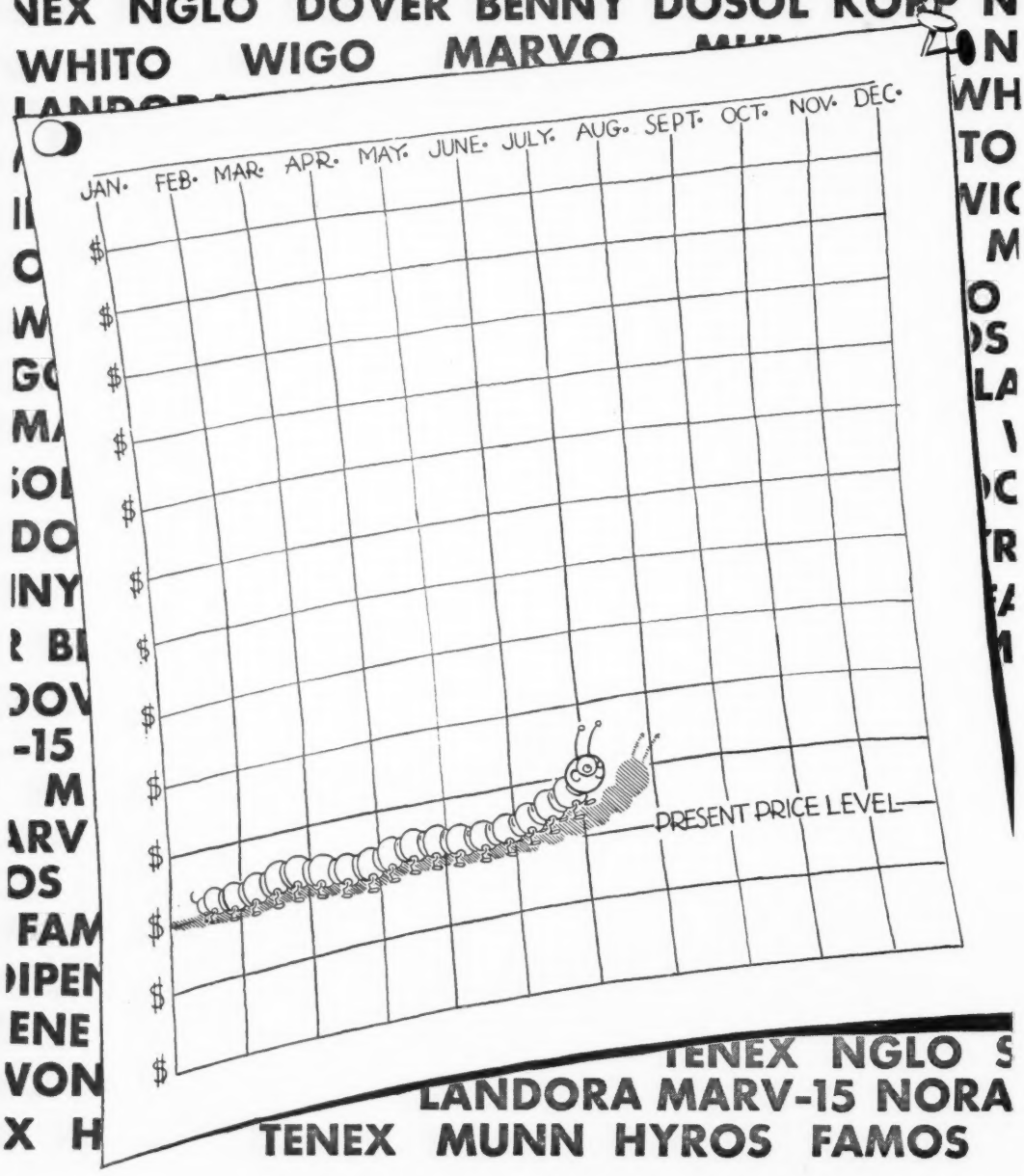
Quaker Chemical Products Corporation, Conshohocken, Pa., has applied for a patent on a new oil product that can be added to various waxes for the purpose of making them water soluble. With some of the waxes the dispersion is so fine that there is no separation of the solid wax in long water dilutions. This same material is also said to combine with fatty and mineral oils, making the finished combination completely soluble in water.

—o—

Guatemala has reduced import duties on unperfumed medicinal soap, various toilet preparations and chemicals from fifty to eighty per cent. The classification on perfumed medicinal soaps has also been changed.

J. T. Robertson Co., Syracuse, N. Y., soap manufacturers, made a direct appeal to their home town folks with a striking window display which appeared recently for a week in the window of a local bank. It was part of a series of displays of "Made in Syracuse" products in that city.

SOLROS DIPENTENE WONEX HYREX HYRC
NEX NGLO DOVER BENNY DOSOL KORP N
WHITO WIGO MARVO



TENEX NGLO S
LANDORA MARV-15 NORA
TENEX MUNN HYROS FAMOS

We see definite indications of an upturn ↗....
we suggest our friends may save by buying now!

Newport Wood Rosins and Steam Distilled Wood Turpentine, Pine Oils and Dipentene

GENERAL NAVAL STORES COMPANY, *Inc.*

Address Our Main Office: *75 East 45th St., New York City* NEWPORT Plants: *De Quincy, La.—Pensacola, Fla.—Bay Minette, Ala.*

Form Chemical Specialty Assn.

National Association of Chemical Specialty Manufacturers has been formed by manufacturers of polishes, cleaners, cleaning fluids, plumbing specialties, automotive specialties, cements, adhesives, inks, bleaches, and associated products to take in that group of chemical specialty manufacturers under the National Recovery Act whose problems are not akin to any other group in the chemical and allied field. Dr. Foster D. Snell of Brooklyn, N. Y., after consultation with the N. R. A., has taken the lead in the formation of the organization at the behest of certain leading manufacturers in the field. A code for the industry has been drafted and copies are available to interested firms. It is planned to have the general code approved by Washington and in effect about September 1st. There will be sub-codes for various branches of the organization covering the problems of each particular group. An outline of the purposes and a copy of the general code may be obtained by communicating with the offices of the Association at 305 Washington St., Brooklyn, N. Y.

—o—

Procter & Gamble Earnings Increase

Procter & Gamble Co. earned net profit of $10,811,325 during the year ended June 30, 1933, equivalent after preferred dividend requirements, to $1.52 a share on 6,410,000 common shares. It compares with $9,132,545, or $1.26 a common share, in the preceding fiscal year. Gross sales for the year totaled $102,463,645, as against $142,421,659 the year before, a drop of 28 per cent. Measured in tonnage, volume showed a drop of only 14 per cent, and according to the report of Col. William Cooper, chairman of the board, the entire decrease was confined to sales of the subsidiary Buckeye Cotton Oil Co.

For the quarter ended June 30, 1933, net profit was $3,738,572, equal after preferred dividends, to 54 cents a share on the common stock, compared with $2,451,052, or 34 cents a common share in the preceding quarter.

The balance sheet as of June 30, 1933, shows current assets amounted to $65,485,154 and current liabilities to $5,868,297, compared with $63,629,088 and $5,129,613, respectively, on June 30, 1932. Cash totaled $5,823,566, against $7,055,671 a year before, and United States Government and municipal securities were $18,605,295, compared with $14,469,237.

—o—

Fix 1933-34 Whale Oil Output

The Norwegian Whaling Association has now fixed the total production of whale oil for next season at 1,815,000 barrels. It is estimated that the probable catches of companies who do not belong to the association will be: Unilever, Ltd., 350,000 barrels; Salvesen & Co., 300,000 barrels; Irwin & Johnson, 125,000 barrels; Suderoy Co., 50,000 barrels. Total, 825,000 barrels.

—o—

Addington Doolittle, head of Compagnie Parento, Croton-on-Hudson, N. Y., has been elected president of the Croton Rotary Club.

Pacific Potash Soapers Elect

A. L. Bobrick, president of the Bobrick Manufacturing Co., Los Angeles, was chosen first president of the Pacific Coast Potash Soap Manufacturers and Distributors' Association at its recent election of officers. F. J. Zorn, president of the North Coast Chemical & Soap Works, Seattle, was elected vice-president. E. C. Bolte of Michel & Pelton, Oakland, Calif., was chosen secretary and treasurer. Members of the Board of Directors were elected as follows: S. S. Hockwald of the Hockwald Chemical Co., San Francisco; W. D. McWaters of Zellerbach Paper Co., Portland, Ore.; A. T. Alden of Pacific Chemical Co., Los Angeles; H. Toplitsky of Southern California Disinfecting Co., Los Angeles; Lee Lovinger of Lovinger Disinfecting Co., Salt Lake City; O. B. Marston of O. B. Marston Supply Co., Phoenix, Ariz.; D. M. Lemen of Banner Manufacturing Co., Denver. The Pacific Coast potash soap group was represented at the general meeting of the soap industry, held Aug. 15 in Chicago under the auspices of the Association of American Soap & Glycerine Producers, by Vice-President F. J. Zorn.

—o—

British Psychologists Study Soap Selling

Soap and psychology may not seem very closely related, but actually there is a definite link between them, according to the British National Institute of Industrial Psychology. The Institute has just concluded a special investigation for the big soap firm of Wright, Layman & Umney, Ltd.

The investigators report that the observant soap salesman can tell more or less by looking at his customer what the individual soap demands will be. Women, for example, have quite different ideas from men when they set out to buy a cake of soap. The former are largely influenced by appearances—the vanity of their own personal appearance and the appearance of the soap before it is unwrapped. The decorative wrapping has considerable influence with women, but a large percentage of men pay no attention at all to this factor. Although each sex has definite and different ideas upon the soap question, women are in an overwhelming majority when it comes to knowing what the other side do. Seventy per cent of women can say at once what soap their menfolk use; not more than thirty-five per cent of men can reply if asked the same question about their wives.

The investigators state that with the great majority of women the first consideration is whether the soap is good for the complexion. Good lather and pleasant perfumes are the next points. Purity as such came well down on the feminine list of essential qualities. Men have an entirely different attitude. Purity first, closely followed by antiseptic qualities are what they seek, and, having found these, they ask no more from the soap which they use. About shaving soap, however, they are inclined to be particular, demanding good lathering qualities as well as those above enumerated.

SOAP presents a *perfuming problem* of a special character. To handle it successfully requires intimate knowledge of soap manufacturing and, above all, experience with soap perfumes.

We have done a considerable amount of work along those lines, and offer several series of soap perfumes of *tried worth.*

Send for *smelling samples.*

Almond
Almond—Rose
Almond—Cocoa
Antiseptic Odor
Bouquets of great variety
Carnation
Cedar
Citrella
Cologne
Fougere
Gardenia
Geranium
Girella
Jasmin
Lavender
Lemon
Lilac
Lily
Mint
Narcissus
Orange
Oriental
Patchouly
Pine
Pineapple
Rose
Sandalwood
Sweet Pea
Verbena
Violet

Also many odors for shampoo and liquid soap

van Ameringen-Haebler, Inc.

Aromatic Essentials

315 Fourth Avenue, New York
180 No. Wacker Drive, Chicago
438 West 48th St., Los Angeles
42 Wellington Street, E., Toronto

Factory, Elizabeth, N. J.

CHICAGO TRADE NOTES

CHICAGO PERFUMERY, SOAP AND EXTRACT ASSOCIATION is scheduled to resume its regular monthly meetings on September 5. W. Kedzie Teller, Secretary, recently distributed the 1933 membership directories, which show an active membership at present of 73. Members are rapidly signing up under the NRA and a special meeting is contemplated to discuss the new code for the cosmetic and essential oil industries.

—o—

The new addition to the Chicago plant of Allen B. Wrisley Co. will probably be ready for occupancy on September 1. A floor area of over 15,000 square feet will be available for the manufacture of toilet soaps and cosmetics.

—o—

American Advertised Products was recently organized and established at 11 E. Austin avenue, by J. L. Younghusband, well known to the cosmetic trade. The new company will handle the products of Tattoo, Inc., and De Wan Laboratories.

—o—

Bristol-Myers Co., 900 N. Franklin street, will, in the near future, increase by 20 per cent the space they occupy at that address.

—o—

The third tournament of the golf auxiliary of the Chicago Perfumery, Soap and Extract Association and the Chicago Drug and Chemical Association brought the largest crowd of the season to the Bob-O-Link Club on Tuesday, July 18. Close to fifty members and guests assembled and the following prizes were awarded. Class A: first prize, A. C. Drury, A. C. Drury & Co., with 84—7, net 77; second prize, George M. Van Kirk, G. M. Van Kirk & Associates, with 90—10, net 80; third prize, Harry G. Larson, Hazel-Atlas Glass Co., with 91—10, net 81. Class B: first prize, Harry B. Elwell, Pennsylvania Oil Co., with 99—17, net 82; second prize, Walter H. Jelly, Walter H. Jelly & Co., with 97—14, net 83; third prize, A. G. Schneider, Victor Chemical Works, with 100—17, net 83. Class C: first prize, J. A. A. Scott, Merck & Co., with 101—28, net 73; second prize, P. J. Cosgrave, Drug Trade News, with 108—27, net 81; third prize, John Buslee, Neumann-Buslee & Wolfe, Inc., with 107—25, net 82. Guest prizes were awarded to A. J. Coenture, of National Carloading & Forwarding Co., with 97—20, net 77; and W. F. Zimmerman, of Helfrich Laboratories, New York Office, with 92—14, net 78. The unusual success of the mid-season tournaments is due to the diligence of Elmer Smith, Chairman. He has secured the use of very exclusive private courses and has induced the members to bring many guests. Among the latter at the last tournament were H. F. Woulfe, purchasing agent of Pepsodent Co., Clyde C. Marshall, president of Petrolager Laboratories, Inc.; Attorney Harry Hitzeman, and Cal Smith, Chicago manager of Roesling, Monroe & Co. The fourth tournament was held on August 15 at Westmoreland Country Club.

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Scientific Laboratories, Inc., 104 N. Hillside St., Wichita, Kan., has been organized by Charles Woodring to manufacture a line of toilet preparations.

—o—

Mrs. Eleanor Jones, widow of Frank H. Jones, long a soap manufacturer in Cambridge, Mass., died early in July at Amityville, N. Y.

When the Chicago trade plays golf—a few snapshots of some well-known characters at the Bob-O-Link course at a recent tournament: 1.—Carl Smith and Elmer F. Smith. 2.—Messrs. Andersen, Drury, Wilhelm, Schutte, and Vance. 3.—Messrs. Elwell, Swart, Van Kirk, Zimmerman, Woulfe, Larson, Buslee, Schutte. 4.—H. F. Woulfe of Pepsodent. 5.—John Buslee and Walter Jelly. A. C. Drury won low gross with an 84.

D&O
ESTABLISHED IN 1798

ESSENTIAL OILS
SYNTHETIC AROMATICS
COMPOUNDED PERFUME BASES
For the Soap and Insecticide Industries

TO SOAPMAKERS

We offer the widest range of

PERFUME MATERIALS

Essential Oils

of our own distillation or direct importation. "D & O" label assures purity and fine quality.

Aromatic Chemicals

Imported or domestic manufacture. We guarantee highest chemical purity and finest quality.

"D & O" Compounded Perfume Bases

Finished odors of any type desired, ready for use in Toilet Soaps, Liquid Soaps, Shampoos, Bath Salts, etc.

A few outstanding French Specialties

Fabriques de Laire

Miel pour Savons
Civette Artificial
Amyl Phenylacetate
Para Cresol Phenylacetate
Phenyl Methyl Carbinol Acetate (Styrolyl Acetate)

J. Mero & Boyveau

Lavender Concrete
Aspic Absolute
Fixodors: Benzoin, Styrax, Tolu, Labdanum, Olibanum
Oils: Spike, Rosemary, Thyme, Lavender

Submit your problems to our Service Department.

DODGE & OLCOTT COMPANY

180 VARICK STREET NEW YORK, N. Y.

Stocks carried in
CHICAGO, ST. LOUIS, BOSTON, PHILADELPHIA AND LOS ANGELES

"The integrity of the house is reflected in the quality of its products"

PERSONAL AND IMPERSONAL

George F. Siddall & Co., Providence, R. I., textile soaps, will shortly open a branch soap plant at Camp Wadsworth, Spartanburg, S. C., where they have acquired a building.

—o—

J. R. Watkins Co., Winona, Minn., will start operation of its new toilet soap plant at the Winnipeg branch about September 1. Cold-made soaps have been produced at this plant for a number of years, and in view of recent developments in the Canadian tariff situation it was found advisable to install facilities for producing milled soaps for the Canadian trade.

—o—

Allen B. Wrisley Co., Chicago, is completing construction of an addition to its plant in the Clearing Industrial District of Chicago. Equipment has been installed to increase facilities for production of toilet soaps, soap flakes and toilet preparations. The addition was expected to be ready for occupancy about August 15.

—o—

Royal Soap Co., Kansas City, has started the manufacture of laundry and toilet soaps in quarters at 505 West Fifth St. Officers include: Dr. D. H. Reeder, president; Theodore Offenstein, vice-president; C. W. Reeder, treasurer; and Lee Reeder, secretary.

—o—

Johnson & Johnson, New Brunswick, N. J., have decreased the price of their baby soap from 25c to 15c per cake. No change in the size of cake or quality of product has been made.

—o—

Los Angeles Soap Co., Los Angeles, Calif., on July 17 started a new radio advertising campaign for its White King Soap, using electrical transcription on fifty western broadcasting stations. Advertising agency in charge is the Barnes-Campbell Company of this city.

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Increased sales are reported by Lever Bros. Co. as a result of its Prosperity Builders Merchandising Contest launched in June, according to R. N. Hallowell, head of the dealers' service department. The slogan of the campaign is "Talk Prosperity, Think Prosperity, Build Prosperity," and gold colored celluloid buttons with the slogan, "Prosperity Builder," are being distributed. Special window displays and prizes for salesmen are other features.

Working to capacity the Iowa Soap Co., Burlington, Iowa, went on a new schedule Aug. 1, the number of new employes added being 125, with a maximum work week of 35 hours, according to Homer Banta, president. Skilled workers will work longer, office help 40 hours, the 35 hour schedule applying to the factory. Wage levels will revert to those obtaining as of July 15, 1929.

—o—

Benjamin Talbot Babbitt Hyde, president of B. T. Babbitt Co. for ten years prior to its sale, died July 27 in Santa Fe, N. M., from injuries sustained in an automobile accident July 23. Mr. Hyde, who was sixty years old, is survived by a widow, his father, Dr. Frederick E. Hyde, a brother and three sisters.

—o—

Scholler Bros., Inc., Philadelphia, soaps and finishing materials, have awarded a contract for construction of a new warehouse which will cover an entire city block and give the concern 57,000 square feet of additional floor space. The manufacturing capacity of the present plant will be increased 100 per cent by the move.

—o—

Grafton B. Perkins, advertising manager of Lever Bros. Co., has been elected to the board of directors of the Audit Bureau of Circulation, to represent the advertiser division.

—o—

Roscoe C. Edlund, general manager of the Association of American Soap and Glycerine Producers, is giving a series of addresses over the blue network of the National Broadcasting Company on the Industrial Recovery Act, its meaning and purposes to the general public. His first two talks were on Aug. 11 and 18. His final talk will be on Aug. 25 at 7:15 P. M. Eastern Daylight Time. Mr. Edlund is speaking as representative of the American Trade Association Executives, of which he is president.

—o—

A new size cake of Woodbury's Facial Soap has recently been introduced to sell at 10c. Some resentment has been encountered among druggists in the Chicago district on the grounds that this kills sale of the 25c cake. The price of the latter has been cut as low as 14c in recent months in the Chicago district.

—o—

A company has recently been floated at Stockton, England, to manufacture soap products, including

GERANIOL for SOAP

In various grades to meet every requirement as to price

●

A. M. TODD COMPANY

KALAMAZOO, MICH.

Business established in 1869

STOKES & SMITH Co

PACKAGING MACHINERY · PAPER BOX MACHINERY

4916 Summerdale Avenue

PHILADELPHIA, PA.

COULD YOUR FILLERS DO THIS JOB? • • •

Quickly, accurately, cleanly, the wide variety of "Farmers Pride" products goes into an equally wide variety of containers with the help of Stokes & Smith Universal Fillers.

Changing from one container to another of different size or style is but a few minutes' work. And each time the auger feed of a Stokes & Smith Filler puts a measured or weighted portion of "Farmers Pride" merchandise into its container, there is a definite, measurable cash saving.

Accurate, S & S Fillers prevent over-filling, save the loss of goods that are sold but never paid for. Clean, S & S Fillers prevent drip or spill, waste or unsanitary working conditions. Fast, each Filler does the work of several experienced hand operators. Flexible, S & S Fillers will fill almost any container with almost anything.

Details and specifications will be gladly furnished upon request

"Snowunda," a new soap which, it is claimed, requires no scrubbing. The name of the new company is also "Snowunda."

—o—

Procter & Gamble Co., Cincinnati, has appointed Blackett-Sample-Hummert, Inc., Chicago, to handle advertising of "Oxydol" the appointment being effective September 1.

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Ultra Chemical Works, manufacturers of soaps and sanitary specialties for the jobbing trade, have moved their plant from Hawthorne, N. J., to Wood & Shady Sts., Paterson, N. J.

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Victor A. Acer, sales manager of Spencer Kellogg & Sons' Co., Buffalo, for the past ten years, has recently been named a vice-president of the company.

—o—

A petition in bankruptcy has been filed against Bell Sales Corp., New York, distributor of soaps and cosmetics, by Wishnick-Tumpeer, Inc., New York, creditor to the amount of $300.

—o—

National Oil Products Co., Harrison, N. J., has increased its radio schedule on "Admiracion" shampoo to three programs per week.

—o—

Olo Soap Co., Beaver Dam, Wis., has recently taken larger quarters in the Western Malleables building. The concern, headed by A. C. Klatt, has recently completed its fourth year of successful operation.

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Chemical Research Corp. has been incorporated under the laws of Maryland to engage in the manufacture and distribution of tooth paste and other toilet preparations. The concern is located at 752 Carroll St., Baltimore. Edward O. Doeplitz is president.

—o—

Manufacturers in the beauty field have recently organized under the name of Allied Manufacturers of the Beauty and Barber Industry, with offices at 36 West 44th St., New York. George D. Chisholm is president of the new organization which will operate under the conditions of the NRA.

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Medgentra Limited of 13 Corraterie, Geneva, Switzerland, announce that they are interested in getting in touch with American manufacturers of the cheapest types of toilet soaps suitable for the native trade in North Africa where they have extensive interests.

—o—

Van Dyk & Co., formerly at 50 West 17th St., New York, have moved their offices to 57 Wilkinson Ave., Jersey City, where their factory is located. New York telephone calls are routed through REctor 2-0939, the New Jersey phone number being No. Bergen 3-3984.

Buromin Co., Pittsburgh, has established a fellowship at the Mellon Institute for investigating the uses of certain dehydrated phosphates in water conditioning and detergents. The investigation will be principally on sodium metaphosphate. Dr. Bernard H. Gilmore, who for five years held the fellowship of the Laundryowners National Association at Mellon Institute, is the incumbent of the new fellowship. The use of metaphosphate in removing residual calcium and other insoluble soaps will constitute part of his work.

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Para Laboratories, New York, have recently introduced two new shampoos through the jobbing trade.

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Douglas W. Coutlee, for the past three years with E. R. Squibb & Sons, has been appointed director of advertising for Merck & Co., Rahway, N. J.

—o—

La Gerardine, Inc., maker of "La Gerardine" hair preparation, has recently occupied new and larger offices at 155 East 44th St., New York.

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Leeming Miles Co., Ltd., Montreal, has been appointed representative in eastern Canada for sale of Krank toiletries.

—o—

The National Broadcasting Company has recently published a booklet entitled "A Study of the Network Broadcast Advertising of the Soap and Housekeepers' Supplies Industry," copies of which are available on request through the Sales Promotion Manager, NBC, 711 Fifth Ave., New York.

—o—

Richard N. Statham is in charge of the new branch office recently opened by the Industrial Chemical Sales Co., at Columbus, Ohio. The address of the new office is 370 W. Broad St., telephone, Main 4142. Mr. Statham was formerly assistant manager of the Chicago office.

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American Products Co. reports net loss of $32,045 for the six months ended March 31, comparing with loss of $47,761 during the corresponding period of the previous fiscal year.

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The carload freight rate on corn, coconut, cottonseed, palm kernel, peanut, soybean and sunflower oils, from Long Island City to Corona, N. Y., has been reduced to 5c per cwt. by approval of the New York Public Service Commission.

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A traffic audit bureau has been organized by the Association of National Advertisers, Inc., whose function is the control of circulation statements in connection with outdoor displays.

—o—

A sales agency for cleansing compounds has been started by Kurt R. Sternberg, 67 Kimberly Ave., Springfield, Mass.

cannot be compared with ordinary perfumes and essential oils. Felton's Coloromes are SCIENTIFICALLY MADE AND TESTED for dependable uniformity and 100% effectiveness.

FELTON CHEMICAL COMPANY, INC.

Executive Offices and Factory—599 JOHNSON AVE., BROOKLYN, N. Y.

Chicago, Ill., Office—1200 NORTH ASHLAND AVE.

Stocks Carried in the Following Cities:

LOS ANGELES, CAL.	SAN FRANCISCO, CAL.	CHICAGO, ILL.	NEW ORLEANS, LA.
WM. PAUER,	A. H. DOREMUS,	M. HARTSTEIN,	ROBERT E. FELTON,
1131 N. Orange Grove Ave.	1282 Folsom St.	1200 No. Ashland Ave.	Balter Bldg., Rm. 407

RECORD OF TRADE-MARKS

The following trade-marks were published in the July issue of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks Filed

TULSITE—This in solid letters describing soaps and cleaning compounds. Filed by Tulsite Chemical Products Co., Tulsa, Okla., Nov. 27, 1931. Claims use since Aug. 1, 1930.

PETER PAN—This in outline letters with picture of woman, describing soap. Filed by Colgate-Palmolive-Peet Co., Chicago, Mar. 17, 1933. Claims use since 1910.

SPRAYMIST—This in solid letters describing sweeping compound. Filed by Acme Chemical Co., Milwaukee, Apr. 12, 1933. Claims use since Apr. 2, 1932.

TRUX-O CLEANSER—This in outline letters describing washing compound. Filed by Trux-O Chemical Co., Kansas City, May 8, 1933. Claims use since Sept. 1, 1932.

WIGLERS—This in heavy script describing soap and shaving cream. Filed by Albert I. Wigler, Newark, May 18, 1933. Claims use since Apr. 15, 1933.

FLY-FOE—This in solid letters describing insecticide. Filed by Johnson Oil Refining Co., Chicago, Sept. 19, 1932. Claims use since Aug. 23, 1932.

CENTURY—This in solid letters describing insecticide and disinfectant. Filed by Louis O. Eck, Detroit, Apr. 14, 1933. Claims use since Aug. 1, 1911.

ROBINSON'S—This in solid letters describing wax polish. Filed by Robinson Products, Ozone Park, L. I., N. Y., Jan. 20, 1933. Claims use since November, 1931.

SILVER LUSTRA—This in script describing polishes. Filed by Silver Lustra Co., York, Pa., June 19, 1930. Claims use since Jan. 1, 1905.

ALBA—This in heavy script describing toilet soap. Filed by M. Werk Co., St. Bernard, Ohio, Nov. 3, 1931. Claims use since June 6, 1931.

RE-GLO—This in solid letters describing scouring compound. Filed by Quik Manufacturing Co., Philadelphia, Dec. 2, 1932. Claims use since Nov. 29, 1932.

SPEED SOPE—This in solid letters describing liquid soap. Filed by Wilbur White Chemical Co., Owego, N. Y., Apr. 12, 1933. Claims use since Feb. 20, 1933.

WASHAL—This in solid letters with drawing of wash on line, describing granulated soap. Filed by Washal Co., Brooklyn, Apr. 29, 1933. Claims use since February, 1931.

WHITE SWAN—This in solid letters describing shoe polish. Filed by S. H. Kress & Co., New York, May 26, 1933. Claims use since Feb. 1, 1933.

PALMOLIVE—This on reverse plate describing shaving cream. Filed by Colgate-Palmolive-Peet Co., Chicago, May 27, 1933. Claims use since May 15, 1931.

49—This in solid letters describing insecticide. Filed by No. 49 Co., Houston, Apr. 11, 1933. Claims use since Jan. 1, 1933.

PRO-PHY-SAN—This in solid letters describing antiseptic. Filed by York Pharmacal Co., St. Louis, May 11, 1933. Claims use since Apr. 1, 1932.

PETZIDE—This in "Old English" type letters describing insecticide. Filed by Elizabeth Petz, Adams, Mass., May 11, 1933. Claims use since Feb. 1, 1933.

MOJESTE—This in solid letters describing antiseptic. Filed by Mojeste Laboratories, N. Y., May 15, 1933. Claims use since Sept. 1, 1932.

WHITE BAND—This in solid letters describing insecticide. Filed by U. S. Phosphoric Products Corp., N. Y., May 16, 1933. Claims use since Apr. 8, 1933.

SCRAM!—This in shaded letters describing cleaning compound. Filed by Scram Products Co., Detroit, Feb. 17, 1933. Claims use since Oct. 15, 1932.

PORTERS FRIEND—This in solid letters on package bearing picture of man using polish, describing metal polish. Filed by North American Polish Co., Cleveland, May 6, 1933. Claims use since Jan. 1, 1902.

SAM'S BRUSHLESS SHAVING CREAM—This on reverse plate on carton describing shaving cream. Filed by Travis Co., N. Y., May 18, 1933. Claims use since Mar. 8, 1933.

B M—These letters describing soap. Filed by Los Angeles Soap Co., Los Angeles, June 5, 1933. Claims use since Feb. 10, 1933.

HYSAN—This in solid letters describing disinfectants and insecticides. Filed by Hysan Products Co., Chicago, Jan. 11, 1933. Claims use since Apr. 1, 1931.

ZORATOR—This in solid letters with sketch of device fixed to toilet bowl, describing deodorants and disinfect-

ants. Filed by Zoro Co., Oak Park, Ill., Apr. 14, 1933. Claims use since Oct. 1, 1932.

NUFUME—This in shaded letters describing insecticides and germicides. Filed by Neway Products Corp., Chicago, May 8, 1933. Claims use since Mar. 28, 1933.

MIST-EX—This in solid letters describing insecticide. Filed by William Bird Lewis, Pickens, S. C., May 17, 1933. Claims use since Aug. 1, 1930.

LIQUI-SWAT—This in broken letters describing insecticide. Filed by Calumet Refining Co., Chicago, May 18, 1933. Claims use since May 9, 1933.

GRAND SLAM—This in engraved letters with background of card hand, describing insecticide. Filed by Great Eastern Laboratories, Baltimore, May 23, 1933. Claims use since Feb. 25, 1933.

THRIFTY MAID—This in solid letters on package carrying sketch of girl's head, describing cleaning powder. Filed by Batex Products Co., Batavia, Ill., Apr. 17, 1933. Claims use since Feb. 20, 1933.

VITOZONE—This in solid letters describing polish, cleaner, soap, etc. Filed by Fuld Bros., Inc., Baltimore, Apr. 26, 1933. Claims use since Nov. 1, 1932.

"BETTER-SHAVE"—This in solid letters on carton describing shaving cream. Filed by Diehl Research Laboratories, Ltd., Los Angeles, May 5, 1933. Claims use since Jan. 26, 1933.

CAMPANA'S—This in type resembling script, describing toilet soap. Filed by Campana Corp., Batavia, Ill., May 15, 1933. Claims use since May 10, 1933.

CRESCENT—This in solid letters on carton describing metal polish. Filed by Crescent Products Co., Chicago, May 24, 1933. Claims use since May 9, 1933.

TANG-O-TH-SEA—This in solid letters describing soap. Filed by Kelp-Ine Products Corp. of America, Seattle, May 24, 1933. Claims use since Oct. 1, 1932.

ULTREX—This in solid letters describing cleansing compound. Filed by Ultrex Products Corp., Boston, May 27, 1933. Claims use since May 16, 1933.

SUDITE—This in solid letters describing soap. Filed by Sudite Chemical Mfg. Corp., Charlotte, N. C., June 6, 1933. Claims use since Oct. 29, 1932.

CHIVO BLANCO—This in solid letters describing soap. Filed by Sugarland Products Co., San Antonio, June 9, 1933. Claims use since Mar. 4, 1933.

ROSE QUEEN—This in solid letters describing hand soap. Filed by Haskins Bros. & Co., Omaha, June 14, 1933. Claims use since January, 1885.

RED CAP FOR CONTAINER, marking washing fluid, disinfectant and bleach. Filed by C. M. Kimball Co., Everett, Mass., Jan. 7, 1933. Claims use since Nov. 7, 1932.

DELMO—This in solid letters describing insecticidal and germicidal sprays. Filed by California Spray-Chemical Corp., Berkeley, Cal., May 29, 1933. Claims use since Feb. 22, 1933.

KLEEN-O-CIL—This in solid letters describing insecticides, germicides, fungicides. Filed by California Spray-Chemical Corp., Berkeley, May 29, 1933. Claims use since Mar. 15, 1933.

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Trade Marks Granted

304,350. Poison in Paste Form. Stearns' Electric Paste Co., Chicago. Filed December 29, 1932. Serial No. 333,486. Published March 28, 1933. Class 6.

304,388. Soaps, Cleansers and Cleaning Compounds. Morris Wishnetzky, New York. Filed September 17, 1931. Serial No. 319,162. Published November 24, 1931. Class 4.

304,389. Soaps, Cleansers and Cleaning Compounds. Morris Wishnetzky, New York. Filed September 17, 1931. Serial No. 319,163. Published November 24, 1931. Class 4.

304,391. Soaps, Cleansers and Cleaning Compounds. Morris Wishnetzky, New York. Filed September 17, 1931. Serial No. 319,161. Published November 24, 1931. Class 4.

304,475. Insecticides. Sherwin-Williams Co., Cleveland. Filed March 6, 1933. Serial No. 335,524. Published April 25, 1933. Class 6.

304,481. Shaving Cream. Chevron, Ltd., New York. Filed March 11, 1933. Serial No. 335,595. Published April 25, 1933. Class 4.

304,487. Soap. Colgate-Palmolive-Peet Co., Chicago. Filed March 17, 1933. Serial No. 335,768. Published April 25, 1933. Class 4.

304,492. Shoe Cleanser and Polish. Shu-Milk Products Corp., Orange, N. J. Filed February 15, 1933. Serial No. 335,006. Published April 25, 1933. Class 4.

304,514. Insecticide and Disinfectant. Bullen Chemical Co., Folcroft, Pa. Filed August 3, 1932. Serial No. 329,300. Published September 20, 1932. Class 6.

304,522. Insecticide. Dao Corp., Terre Haute, Ind. Filed May 31, 1932. Serial No. 327,600. Published April 25, 1933. Class 6.

304,576. Insecticides. John Lecroy & Son, Camden, N. J. Filed February 6, 1933. Serial No. 334,683. Published April 11, 1933. Class 6.

304,655. Insecticide and Fungicide. J. W. Woolfolk Co., Fort Valley, Ga. Filed April 20, 1931. Serial No. 313,573. Published April 25, 1933. Class 6.

304,665. Polishing Wax. S. C. Johnson & Son, Inc., Racine, Wis. Filed October 29, 1931. Serial No. 320,592. Published April 25, 1933. Class 16.

304,696. Floor and Wall Cleaner and Liquid Soaps. Wilson and Buster, Inc., Kansas City, Mo. Filed March 20, 1933. Serial No. 335,899. Published May 2, 1933. Class 4.

304,701. Laundry and Toilet Soap. Colgate-Palmolive-Peet Co., Chicago. Filed March 21, 1933. Serial No. 335,928. Published May 2, 1933. Class 4.

304,743. Floor Wax. Kleenwax Co., San Antonio, Tex. Filed September 2, 1932. Serial No. 330,066. Published May 2, 1933. Class 16.

304,755. Insecticide. Red Circle Products Co., Hous-

ton, Tex. Filed March 24, 1933. Serial No. 336,054. Published May 9, 1933. Class 6.

304,781. Liquid Furniture Polish. John G. Hamilton, Inc., New York. Filed March 18, 1933. Serial No. 335,816. Published May 9, 1933. Class 16.

304,809. Shampoos. La Fontaine, Ltd., Glendale, Calif. Filed December 20, 1932. Serial No. 333,246. Published May 2, 1933. Class 6.

304,831. Soaps. National Oil Products Co., Harrison, N. J. Filed November 12, 1932. Serial No. 332,097. Published May 2, 1933. Class 4.

304,891. Soap. Colgate-Palmolive-Peet Co., Chicago. Filed March 17, 1933. Serial No. 335,769. Published May 2, 1933. Class 4.

304,954. Fumigant. Lethelin Products Co., Manhasset, N. Y. Filed March 7, 1933. Serial No. 335,466. Published May 9, 1933. Class 6.

304,960. Insecticides. Furst-McNess Co., Freeport, Ill. Filed March 10, 1933. Serial No. 335,580. Published May 9, 1933. Class 6.

304,023. Toothpaste. Bristol-Myers Co., New York. Filed February 23, 1933. Serial No. 335,186. Published May 2, 1933. Class 6.

305,025. Poison in Paste Form. Stearns' Electric Paste Co., Chicago. Filed February 16, 1933. Serial No. 335,039. Published May. 9, 1933. Class 6.

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Indian Soap Institute Had Better 1932

The Kerala Soap Institute has been appointed soapmaker to Lord Willingdon, Viceroy of India. Despite the general depression, there was an increase in the firm's toilet soap sales of 18,145 rupees in 1931-32 over 1930-31. The result of the 1932 year's working was a net profit of 12,436 rupees, there having been a loss in the two previous years. During the year 16 students were trained in soap-making, some of whom have since started soap factories of their own.

—o—

British Spend More for Soap

It is shown in newly-compiled statistics from London that the annual soap consumption per person in the United Kingdom is 19½ lbs., as compared with 25½ lbs. in the United States. The annual beauty bill of Britain, which contains a very substantial proportion for soap products is £65,000,000 ($325,000,000) as against $560,000,000 spent in America. The latter figures are rather surprising, showing that the British spend substantially more per person on beauty products of all kinds than do Americans, their consumption including soaps being $6.50 per capita for total population in Britain compared to $4.70 in the United States. The proportion of women to men in the United Kingdom is said to be larger than in the United States.

—o—

Continental Can Co. reports the addition of 1,000 employees since March 1, the company now having on its pay roll 700 more employees than at the same time last year.

New Patents

Conducted by

Lancaster, Allwine & Rommel

Registered Attorneys

PATENT AND TRADE-MARK CAUSES

815 15th St., N. W., Washington, D. C.

Complete copies of any patents or trade-mark registration reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine and Rommel. Any inquiries relating to Patent or Trade-Mark Law will also be freely answered by these attorneys.

No. 1,912,637. Manufacture of Soap. Patented June 6, 1933, by Walter A. Harper, Newark, N. J. Apparatus for the manufacture of soap which comprises an elongated mold, an inlet for admission of hot liquid soap to the mold, a plunger within the mold which, when the mold is in filling position, lies adjacent the soap inlet end of the mold, means for introducing hot liquid soap into the mold and causing it to move the plunger along the length of the mold until the mold is filled, whereby the mold is completely filled with soap free from air bubbles, means for cooling the mold and the soap contained therein to effect solidification of the soap, means for applying hydraulic pressure to the plunger to effect removal of the soap from the mold after solidification thereof, the plunger and the solidified rod of soap being forced along the length of the mold by the hydraulic pressure applying medium which also passes into and along the length of the mold, and means for warming the hydraulic pressure applying medium sufficiently to heat the mold to a temperature above the solidification temperature of the soap, whereby the mold can be filled with its next succeeding charge of hot liquid soap without solidification of any portion of the soap until after the mold is completely filled.

No. 1,913,367. Preservation of Oils, Fats, Fatty Oils, Fatty Esters, Fatty Acids, Fatty Acid Salts, and Related Compounds. Patented June 13, 1933, by William S. Calcott and William A. Douglass, Penns Grove, N. J., and Herbert W. Walker, Wilmington, Del., assignors to E. I. due Pont de Nemours & Company, Wilmington, Del. A member of the group fats, fatty oils, fatty esters, fatty acids and fatty acid salts together with 0.001 to 0.1% para hydroxy diphenyl methane as an oxidation inhibitor and rancidification preventative.

No. 1,913,368. Preservation of Oils, Fats, Fatty Oils, Fatty Esters, Fatty Acids, Fatty Acid Salts, and Related Compounds. Patented June 13, 1933, by William S. Calcott and William A. Douglass, Penns Grove, N. J., and Herbert W. Walker, Wilmington, Del., assignors to E. I. du Pont de Nemours & Company, Wilmington, Del. A

(*Continued on Page* 45)

SOLVAY

TRADE MARK REG. U. S. PAT. OFF.

PRODUCTS

SODA ASH
CAUSTIC SODA

LIQUID CHLORINE

Contract or Spot Delivery

In tank cars and multiple unit cars.

Write for Prices

SOLVAY SALES CORPORATION

Alkalies and Chemical Products Manufactured by The Solvay Process Company

61 BROADWAY NEW YORK

Boston, Syracuse, Chicago, Indianapolis, Cleveland, Cincinnati, Pittsburgh, Detroit, Philadelphia, Kansas City, St. Louis

WARNER Quality

PIONEERED FOR NEARLY 50 YEARS

CAUSTIC SODA
HIGHEST GRADE
(ELECTROLETIC)

IN EITHER SOLID OR LIQUID FORM

CARBON TETRACHLORIDE
REDISTILLED WATER-WHITE

SUPPLIED ALSO IN COMBINATION WITH OTHER SOLVENTS TO MEET INDIVIDUAL REQIREMENTS

TRI-SODIUM PHOSPHATE
FINE GRANULAR AND POWDERED

A FREE FLOWING AND NON-CAKING PRODUCT NATIONALLY KNOWN FOR ITS UNIFORM QUALITY

An opportunity to submit samples and quotations is solicited

WARNER
CHEMICAL COMPANY

Pioneer Producers 1886

CHRYSLER BUILDING, NEW YORK CITY
155 E. SUPERIOR ST., CHICAGO
70 RICKARD ST., SAN FRANCISCO

EXCLUSIVE SALES AGENTS for WESTVACO CHLORINE PRODUCTS, Inc.

CONTRACTS AWARDED

Kirkman & Son were recently awarded a contract for 55,380 bars laundry soap for Brooklyn U. S. Army Quartermaster at a price of 2.74c. Armour & Co. awarded 22,080 cans scouring powder at 1.995c. George E. Marsh & Co. awarded 56,200 cakes white floating soap at 2.02c.

—o—

R. M. Hollingshead Co. has been awarded a contract for 3,000 tons floor polish for Brooklyn U. S. Army Quartermaster at a price of 36.5c. John T. Stanley Co. awarded 10,000 lbs. scouring soap at 3.5c. Industrial Home for Blind awarded 5,000 corn brooms at 31c. Ox Fiber Brush Co. awarded 10,000 hand brushes at 6.5c.

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Armour & Co., Chicago, awarded 30,000 lbs. laundry soap for Chicago U. S. Army Quartermaster at 2.77c, 6,000 lbs. at 3c and 1,260 lbs. at 2.85c. John Sexton & Co., Chicago, awarded 500 cakes grit soap at 2.62c, 400 cakes at 2.27c, 1,200 cakes at 2.12c and 100 cakes at 2.37c. Procter & Gamble Distributing Co. awarded 3,000 lbs. laundry soap at 3.11c.

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G. E. Marsh Co. has been awarded a contract for 300,000 lbs. laundry soap for Brooklyn U. S. Army Quartermaster at 4.89c; and 21,200 lbs. at 4.99c. Unity Sanitary Supply Co. awarded 17,000 lbs. at 5.665c and 30,000 lbs. at 7c. Armour & Co. awarded 43,000 lbs. at 5.755c; 6,000 at 5.615c; 14,000 at 5.325c; 9,000 at 5.455c; 11,400 at 5.555c; 36,000 at 5.445c; 31,500 at 5.405c; 10,000 at 5.595c; 6,800 at 5.35c. Noxon Chemical Products Co. awarded 8,000 cans metal polish at 5.18c. R. M. Hollingshead Co. awarded 500 cans floor wax at 58c and 4,000 cans polish at 34.5c.

—o—

Bartlett Chemicals, Inc., have been awarded a contract for 17,500 lbs. caustic soda for U. S. Engineer, New Orleans, at $708.50. Thompson-Hayward Chemical Co. awarded 3,000 lbs. caustic soda at $117.60.

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Taylor Salt Co. has been awarded a contract for 16,000 lbs. washing compound for the U. S. Army Quartermaster at Fort Monroe, Va., at a price of 1.85c lb.

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Newell-Gutradt Company, San Francisco, has been awarded a contract to supply a quantity of grit soap to the U. S. Navy, for both eastern and western yards.

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John Price & Co., Philadelphia, has been awarded a contract for 2,000 lbs. sal soda for U. S. Engineer, Philadelphia, at $1.25 per 100 lbs.

—o—

A corporation manufacturing soaps has signed a stipulation with the Federal Trade Commission agreeing not to use the words "Soaps of the British Empire" or a pictorial representation simulating in appearance the Royal Coat of Arms of the British Empire, or any other words or pictorial representation as a brand or label for its products which would deceive buyers into believing its products are made in the British Empire and imported into the United States, when such is not the case.

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Makers of collapsible tubes have formed the Collapsible Tube Manufacturers Association, officers being: President, Stanley Rumbough, White Metal Manufacuring Co.; vice-president, Frederic Remington, Peerless Tube Co.; directors, H. S. Darlington, A. H. Wirz, Inc.; H. P. Scott, Jr., Bond Manufacturing Corp.; and George DuBoff, Art Tube Co. A code has been submitted specifying a forty-hour week and a minimum wage of $15 for the industry.

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The index of employment in the soap industry stood at 99.5 in June, 1933, compared with 95.8 in May, 1933, and 95.7 in June, 1932. The 12-month average for 1926 is taken as 100. The index of pay-roll totals stood at 83.2 in June, 1933, as against 78.8 in May, 1933, and 90.5 in June, 1932.

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A plant for production of bluing has been opened in Montevideo, Uruguay, by Ricketts, Ltd., British manufacturer. It is reported to have a capacity of 300,000 packages a month.

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Consolidated Products Co., New York, used machinery dealers, recently issued the second edition of "Consolidated News."

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Western Co., Chicago, has placed its advertising account with the Chicago office of J. Walter Thompson Co.

Market Report on

ESSENTIAL OILS AND AROMATICS

(*As of August* 10, 1933)

NEW YORK—Prices of essential oils continued to soar this month, the momentum of the recent advance being sustained even through the abrupt drop in prices of most commodities and the rise of the dollar in the foreign exchange market. Buying for consumer account held up well until late in the period when the tendency became apparent to await further developments in the national situation before extending commitments. The advances were not confined to any particular section of the list, almost every oil showing an increase, some of which were very substantial.

Anise Oil

Anise rose to a basis of 40c to 42c a pound early in the period and then held steady at this point.

Bergamot Oil

Bergamot oil prices advanced sharply this period on a wave of buying, closing quotations ranging from $1.60 to $2.00 a pound, as compared with a low of approximately $1.25 a month ago. Demand was active and buyers were inclined to cover needs despite the sharp mark-up.

Cassia Oil

The market for this oil was comparatively quiet, prices ranging from $1.10 to $1.15 a pound after a ten cent advance.

Citronella Oil

Interest in citronella oil eased off late in the period after a period of activity of several weeks. Fluctuations in exchange kept the market in an unstable state, and recent purchases have apparently taken care of immediate buying needs. Ceylon oil is quoted currently at 38c to 39c and Java oil at 44c to 51c pound.

Lavender Oil

Both flower and spike grades of lavender oil advanced substantially this period, the higher prices being firmly maintained by local suppliers. The inside quotation on flower oil is now $1.65, with spike quoted at 57c to 62c pound.

Peppermint Oil

Prices advanced sharply and then eased off latterly, closing at $3.00 to $3.25 for natural oil. Distillation of new crop oil has started in the middle west and more accurate estimates will shortly be available as to the size of the crop.

Terpineol

Higher replacement costs were responsible for an increase in the price of terpineol this period, spot prices being advanced to a basis of 38c to 35c pound.

—o—

Mysore Expands Sandalwood Interests

The recent decline of world demand for sandalwood oil has been turned to account by the Mysore State sandalwood oil factory in widening the range of toilet requisites and other domestic goods in which the oil can be used. According to Rao Sahib C. Ranganatha Rao, Mysore Trade Commissioner in London, the State factory has been conducting experiments in distilling products like davana and vetivert and also some flowers which yield essential oils possessing value as soap perfumes. A cognate enterprise is the State soap factory, which produces, in addition to high quality sandalwood soaps, various toilet preparations, and has recently undertaken experiments for the manufacture of a number of new toilet and pharmaceutical products.

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A. L. van Ameringen, head of van-Ameringen-Haebler, Inc., New York, sailed for Europe early in August on a two months trip which will take him to Holland, Germany, Switzerland and France, where he will visit principals represented by his firm in the American essential oil trade.

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Fred H. Ungerer, Ungerer & Co., New York, returned late in July from a five weeks trip to Europe. While abroad he visited the principals represented by Ungerer & Co., in United States, Charabot & Co., Grasse, France, and M. Naef & Co., Geneva, Switzerland.

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P. R. Dreyer Inc., New York, essential oils and aromatics, has appointed Marshall Dill as representative on the Pacific Coast. The latter concern operates offices at 2232 East 8th St., Los Angeles, 510 Montgomery St., San Francisco, 409 Gerlinger Bldg., Portland, and 1008 Western Ave., Seattle.

—o—

Givaudan-Delawanna, Inc., New York, has announced a new product, "Castoreum Synthetic," which has a particular application in the soap industry as a retarder of rancidity.

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C. G. Piercy has become associated as sales manager with Ph. Chaleyer, Inc., New York, importers of essential oils and aromatics.

Market Report on
SOAP AND DISINFECTANT CHEMICALS

(As of August 11, 1933)

NEW YORK—Prices of soap and disinfectant chemicals continued firm and well maintained this period, with but few exceptions. Activity was at the recent increased pace, withdrawals on contracts continuing heavy in spite of the usual seasonal slackening expected at this time. Higher prices were quoted on glycerin this period, and another new point of strength developed in cresylic acid. Rosin prices were about steady, with wood and cheap gum grades rising, while the lighter gum grades eased off moderately. During the period alcohol producers put into effect a new and reduced schedule on completely denatured alcohol, No. 5, reducing prices about 5c per gallon.

Alcohol

The new alcohol schedule quoted completely denatured alcohol, No. 5, at 34 to 42c lb., the inside figure prevailing on carload shipments. The move was apparently made to enable alcohol suppliers to win back some of the market lost to alcohol substitutes over the past six or eight months.

Alkalis

Demand for soda ash and caustic soda continued strong as the soap, textile and glass industries continued to operate at high capacity well into the usual summer dull spell. Shipments were heavy and prices well maintained.

Cresylic Acid

A sharp rise in the price of cresylic acid was noted this period, current quotations ranging from 42c to 45c gal. Two factors were responsible for the rise, these being, the higher exchange rates and a continued strong demand for material.

Glycerin

An advance of half a cent a pound was reported on all grades of glycerin except chemically pure this period. Demand was active and, with prices firmly maintained, a further advance was expected in some quarters. Dynamite is quoted currently at 9c to 9¾c lb., with soaps lye at 5c to 5½c lb.

Pyrethrum

After the sharp rise in quotations last period pyrethrum and pyrethrum concentrate steadied this period and were firmly maintained at the advanced schedule. The price of powder is now 28c to 30c lb.

Rosin

The rosin schedule narrowed this period, with wood and the dark gum grades advancing while the higher priced gum grades dropped in value. Receipts were substantial, but as clearings continued heavy, stocks again showed a drop. The closing schedule follows: gum, grade B, \$4.95; H, \$4.95; K, \$4.95; N, \$5.00; WG, \$5.10; WW, \$5.30; wood, \$4.63 to \$4.83.

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Ferdinand Gutmann & Co., Brooklyn, is now supplying can nozzles complete with C. T. screw caps, the combination giving greater ease in removing the cap from the can, while maintaining the desirable resealing properties. A new type Filma-Seal, type J, has recently been patented for use on cans, giving a seal that prevents leakage and evaporation and guards against counterfeiting.

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Figures compiled by the bureau of advertising of the A. N. P. A. show that the budgets of nine large advertisers in the soap and cleanser field were spent in the following manner: magazine advertising, 57.8 per cent; newspaper advertising, 34.0 per cent; and radio advertising, 8.2 per cent.

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New Patents

(From Page 41)

composition of matter comprising a member of the group fats, fatty oils, fatty esters, fatty acids, and fatty acid salts together with 0.001 to 01% para-hydroxy-diphenyl ether as a rancidification preventative and inhibitor of oxidation.

No. 1,915,662. Insecticide, Patented June 27, 1933, by Charles B. Gnadinger, Minneapolis, Minn. A method for preparing a concentrated insecticidal solution which consists in extracting pyrethrum flowers with ethylene dichloride, distilling the extract to obtain an oleo resin, and treating the oleo resin with a mineral oil.

No. 1,915,922. Mothproofing, Patented June 27, 1933, by Ludwig J. Christmann, Jersey City, and David W. Jayne, Jr., Elizabeth, N. J., assignors to American Cyanamid Company, New York, N. Y. The process of mothproofing material which comprises treating it with a composition containing a fatty acid salt of a substance having the following general formula:

$$RNH{-}\underset{\underset{NH}{\|}}{C}{-}NHR'$$

where R and R′ are aryl groups.

RED OIL

STEAR-IC

ACID

TALLOWS

Controlled Production:—

We collect, render and refine all of the raw materials used in our stearic acid and red oil. This close control, not available in any other brand, insures high quality products by eliminating low grade raw materials. Let us submit samples and prices. There is no substitute for quality. Use them in your

Dry Cleaning Soaps

Shaving Soaps

Special Cleaners

Polishes

Liquid Soaps

FANCY - EXTRA and SPECIAL TALLOW

Fatty Acids

Theobald Animal By-Products Refinery

KEARNY, N. J.

ESTABLISHED 1914

SPECIALTY SOAPS

LIQUID SOAP BASE

Coco Oil—60%—Natural, Opal, Green

LIQUID SOAPS

Coconut ..... 10% to 45%
Olive Oil .... 10% to 30%

Colored and Perfumed

SCRUBBING SOAPS

Pine, Sassafrass, Plain

LIQUID SHAMPOOS

Coconut Oil .. 30% to 45%
Olive Oil 30%
Castile 30%

POWDERED and GRANULATED SOAPS

Castile, U. S. P.
Coco Castile 50-50
Pure Coconut

SOFT POTASH SOAPS

Light and Dark

U. S. P. 9th and 10th

PHONE CUMBERLAND 6-2800

KRANICH SOAP CO.

54-60 RICHARDS ST. BROOKLYN, N.Y.

Market Report on

TALLOW, GREASES AND OILS

(*As of August* 11, 1933)

NEW YORK—The market for soapmaking fats, oils and greases continued on the upward grade until late in the period, a number of gains in the general list being reported before the weakness in other commodities caused an easing off in prices toward the close. This latter move was most apparent in tallow and grease, each of which eased off a quarter of a cent a pound from previous quotations. The buying which the lower prices attracted from consumers in the soap field indicated that there is substantial demand for fats and oils, but that the pace of the advance has been a little too rapid to suit buyers.

Coconut Oil

This oil, which has lagged behind the rest of the market over the past few months, caught up a little this period, New York tanks of Manila oil advancing a quarter of a cent to 3½c lb. Activity was not great, as buyers were inclined to hold off due to the weakness in some other oils, and sellers were not inclined to push matters, as in spite of substantial stocks of oil held in this country, prices are still believed to be comparatively low.

Corn Oil

Corn oil moved a cent a pound higher during the period, but in the closing days lost part of its advance due to the drop in commodities and weakness in some other oils. The current market for mill tanks is 5¾c lb.

Cottonseed Oil

The range between crude and refined oil narrowed somewhat this period, PSY oil going lower on the exchanges due to the dip in the security and commodity markets, while crude oil held firm due to growers' unwillingness to part with holdings in view of the smallness of the approaching crop. Recent estimates place the number of abandoned acres at 10,500,000, which will cut substantially the size of the crop unless the yield runs unexpectedly high.

Olive Oil

Quotations on denatured olive oil advanced sharply again this period, the market now being practically nominal at 75c gal. Supplies of Spanish oil remain very light, and no increase in offerings for shipment has been noted. Foots are offered at 6¼c to 6½c lb.

Tallow

After holding at a 4c level for several weeks, tallow prices finally weakened and dropped off a half cent to 3½c lb. for city extra late this period. The occasion for the drop was apparently the recent fall in commodity prices which made producers willing to make concessions. Heavy sales of city extra were reported at the lower figure, and with a return of confidence in other markets prices steadied at the lower level.

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The carload freight on caustic potash, from Solvay and Syracuse to Depew and Black Rock, has been reduced 2c to 13.5c per cwt. by action of the New York Public Service Commission.

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Stocks of crude cottonseed oil on hand in United States as of June 30, 1933, totaled 63,759,258 lbs. as against 51,172,306 lbs. on the same date in the previous year. Stocks of refined oil June 30, 1933, were 737,848,974 lbs. as compared with 672,821,827 lbs. on the same date in 1932.

—o—

Continental Can Co., New York, has taken over the can making business of Manion Steel Barrel Co., Rouseville, Pa. D. F. Manion, Jr., and others of the can making division of the Manion organization, will join the Continental staff.

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"The Book of Stainless Steels" will be published by the American Society for Steel Treating October 1. It will contain 600 pages of practical information on modern industrial use of stainless steels compiled from the works of 75 authorities.

—o—

A New York druggist has introduced an innovation recently in the sale of soap by the yard. Yards of soap, packed in wooden boxes in a choice of colors, were offered at $1.00.

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B. F. Gump Co., Chicago, has issued a 24-page folder describing crushing equipment, agitators, etc., which it offers.

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A prospective buyer is interested in locating the manufacturer of "Skour-Noo." The publishers of *Soap* will appreciate being advised of the maker's name and address.

—o—

National Adhesive Corp., New York, is constructing a new building adjoining its plant at Dunellen, N. J., exclusively for the manufacture of transparent cellulose glues.

CAMPHOR
SYNTHETIC

MADE FROM AMERICAN TURPENTINE

Terpineol, C. P.
WATER WHITE

Menthol Crystals
SYNTHETIC

Thymol U.S.P.
PRIME WHITE CRYSTALS

PRODUCTS OF SCHERING-KAHLBAUM, A. G., BERLIN

SHERKA CHEMICAL CO. INC.
75 WEST STREET · NEW YORK
TELEPHONE · BOWLING GREEN 9-7482

STAUFFER CHEMICALS
for Soaps *and* Cleaners

Caustic Soda

"STAUFFER BRAND" Caustic Soda can be supplied either solid or liquid, in drums or tank cars. It is uniform, pure and worth while using in your soap products. Send your next Caustic Soda inquiry to us.

Carbon Tetrachloride

"STAUFFER BRAND" Carbon Tetrachloride will make a good cleaner better. It is 99.9% pure, the purest obtainable anywhere, is water white and is absolutely free from residue or residual odor. May we work with you when you are next in the market? Let us submit samples and prices. Anything from a drum up.

May we estimate on your requirements?

STAUFFER CHEMICAL COMPANY

Plants
Niagara Falls, N. Y.
Los Angeles, Cal.

Office
420 Lexington Ave.
New York City

CURRENT PRICE QUOTATIONS

As of August 8, 1933

Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.

Chemicals

Acetone, C. P., drums	lb.	.08½	.10
Acid, Boric, bbls., 99½%	ton	95.00	100.00
Cresylic, 97% dk., drums	gal.	.42	.45
97-99%, pale, drums	gal.	—	.45
Oxalic, bbls	lb.	.11	.11¼
Adeps Lanae, hydrous, bbls	lb.	.14	.15
Anhydrous, bbls	lb.	.15	.16
Alcohol, Ethyl, U. S. P., bbls	gal.	2.45	2.59
Complete Denat., No. 5, drums., ex.	gal.	.34	.42
Alum. Potash lump	lb.	.03	.03¼
Ammonia Water, 260, drums, wks	lb.	.02½	.02¾
Ammonium Carbonate, tech., bbls	lb.	.08	.12½
Bleaching Powder, drums	100 lb.	1.75	2.35
Borax, pd., cryst., bbls., kegs	ton	50.00	55.00
Carbon Tetrachloride, car lots	lb.	—	.05¼
L. C. L.	lb.	.06	.08½
Caustic, see Soda Caustic, Potash Caustic			
China Clay, filer	ton	10.00	25.00
Cresol, U. S. P., drums	lb.	.09	.10
Creosote Oil	gal.	.11½	.12½
Feldspar (200 to 325 mesh)	ton	14.00	15.50
Formaldehyde, bbls	lb.	.06	.07
Fullers Earth	ton	15.00	24.00
Glycerine, C. P., drums	lb.	.10¼	.10½
Dynamite, drums	lb.	.09	.09¾
Saponification, drums	lb.	.05½	.06
Soaps, Lye, drums	lb.	.05	.05½
Hexalin, drums	lb.	—	.30
Kieselguhr, bags	ton	—	35.00
Lanolin, see Adeps Lanae.			
Lime, live, bbls	per bbl.	1.70	2.20
Mercury Bichloride, kegs	lb.	.93	1.08
Naphthalene, ref. flakes, bbls	lb.	.04¾	.06
Nitrobenzene (Myrbane) drums	lb.	.09½	.11
Paradichlorbenzene, bbls., kegs	lb.	.15	.23
Paraformaldehyde, kegs	lb.	.38	.39
Petrolatum, bbls. (as to color)	lb.	.01⅞	.06¾
Phenol, (Carbolic Acid), drums	lb.	.14¼	.16
Pine Oil, bbls	gal.	.59	.65
Potash, Caustic, drums	lb.	.06⅛	.07⅛
Flake	lb.	.07	.08⅝
Potassium Bichronate, casks	lb.	.08	.08½
Pumice Stone, powd	100 lb.	2.50	4.00
Rosins (600 lb. bbls. gross for net)—			
Grade B to H, basis 280 lbs	bbl.	4.95	4.95
Grade K to N	bbl.	4.95	5.00
Grade WG and WW	bbl.	5.10	5.30
Wood	bbl.	4.63	4.83
Rotten Stone, pwd. bbls	lb.	.02½	.04½
Silica, Ref., floated	ton	18.00	22.00
Soap, Mottled	lb.	.04⅛	.04⅜
Olive Castle, bars	lb.	.09	.12
powder	lb.	.17	.22
Olive Oil Foot	lb.	.04½	.06
Powdered White, U. S. P.	lb.	.16	.20
Green, U. S. P.	lb.	.06½	.08
Tallow Chips	lb.	.06	.06½
Whale Oil, bbls	lb.	.05	.06
Soda Ash, contract, wks, bags, bbls.	100 lb.	1.17½	1.43
Car lots, in bulk		—	1.05
Soda Caustic, Cont., wks., sld	100 lb.	—	2.55
Flake	lb.	—	2.95
Liquid, tanks	lb.	2.15	2.20
Soda Sal., bbls	100 lb.	1.05	1.15
Sodium Chloride (Salt)	ton	11.40	14.00
Sodium Fluoride, bbls	lb.	.07½	.08½
Sodium Hydrosulphite, bbls	lb.	.22	.26
Sodium Silicate, 40 deg., drum	100 lb.	.75	.80
Drums, 60 deg. wks	100 lb.	—	1.65
In tanks, 15c. less per hundred, wks.			
Tar Acid Oils, 15-25%	gal.	.21	.25
Frisodium Phosphate, bags, bbls	lb.	.03	.0390
Zinc Lxide, lead free	lb.	.06	.06¼
Zinc Stearate, bbls	lb.	.16	.18

Oils—Fats—Greases

Castor, No. 1, bbls	lb.	.10¼	.11
No. 3, bbls	lb.	.09¾	.10½
Coconut			
Ceylon, Coast Tanks	lb.	.03⅛	.03⅜
Cochin, barrels, N. Y	lb.	.05	Nom.
Manila, tanks, N. Y.	lb.	.03½	.03⅝
Tanks, Pacific *w*oast	lb.	.03⅛	.03¼
Cod, Newfound, bbls	gal.	—	Nom.
Copra, bulk, Coast	lb.	—	.0170
Corn, tanks, mills	lb.	.05¾	.05⅜
Bbls., N. Y	lb.	.07⅝	.07¾
Cottonseed, crude, tanks, mill	lb.	—	.05
PSY	lb.	—	.05⅝
Degras, Amer., bbls	lb.	.02¾	.03½
English, bbls	lb.	.03¾	.04
German, bbls	lb.	.03¼	.03¾
Neutral, bbls	lb.	.07¾	.08½
Greases, choice white, bbls., N. Y	lb.	.03½	.04
Yellow	lb.	.03¼	.03⅜
House	lb.	.03¼	.03⅜
Lard, prime, steam, tierces	lb.	.06	.06⅛
Compound tierces	lb.	.07¾	.08¼
Lard Oil,			
Extra, bbls	lb.	—	.08¼
Extra, No. 1, bbls	lb.	—	.08
No. 2, bbls	lb.	—	.07½
Linseed, raw, bbls., spot	lb.	.1070	.1110
Tanks, raw	lb.	—	.1010
Boiled, 5 bbls. lots	lb.	—	.1190
Menhaden, Crude, tanks, Balt	gal.	.17	Nom.
Oleo Oil, No. 1, bbls., N. Y	lb.	—	.06⅝
No. 2, bbls., N. Y	lb.	—	.06⅛
Olive, denatured, bbls., N. Y	gal.	.75	Nom.
Foots, bbls., N. Y	lb.	.06¼	.06½
Palm	lb.	.04	.04½
Palm Kernel, casks, denatured	lb.	.04	Nom.
Peanut, domestic tanks	lb.	.05¾	Nom.
Red Oil, distilled, bbls	lb.	.07	.07⅝
Saponified, bbls	lb.	.07	.07⅝
Tanks	lb.	—	.06
Soya Bean, domestic tanks, N. Y	lb.	—	.08½
Stearic Acid			
Double pressed	lb.	.09½	.10
Triple pressed, bgs	lb.	.12¼	.12¾
Stearine, oleo, bbls	lb.	.06⅜	.06⅝
Tallow, special, f. o. b. plant	lb.	—	.03⅝
City, ex. loose, f. o. b. plant	lb.	—	.03¾
Tallow, oils, acidless, tanks, N. Y	lb.	—	.07¼
Bbls., c-l, N. Y	lb.	—	.07¾
Whale, crude	lb.	.03½	.04
refined	lb.	.06¾	.07

COLUMBIA BRAND

98% - 100%
CAUSTIC SODA
76% Na_2O
Solid – Flake
Ground – Liquid

99% - 100%
SODA ASH
58% Na_2O
Light–Dense
Feather

THE COLUMBIA ALKALI CORPORATION
Executive Sales Offices, EMPIRE STATE BUILDING, NEW YORK CITY
Branch Sales Offices
431-451 St. Clair St., CHICAGO; Carew Tower, CINCINNATI; Santa Fe Terminal Bldg., DALLAS
BARBERTON, OHIO

Steel Pails . . . 14 SIZES

ONE reason why Benetco small containers have been favored for liquid soap, disinfectants, sprays and remedies is the packaging flexibility afforded by the complete range of standard capacities.

They are made in sizes from *1 to 12 gallons*, to meet all marketing demands. This, of course, is in addition to the widely used Benetco larger sizes, 15 to 65 gallons.

Through our complete decorating facilities, including our own offset lithograph plant, Benetco users can utilize the full sales stimulating advantages of distinctive, colorful and permanent trade marks and brand labels—a feature highly valued by the most successful marketers.

If you are using Benetco containers now, you are aware of their reliability . . . if not, you owe it to yourself to let us tell you about them. Complete information involves no obligation.

WILSON & BENNETT MFG. CO.
General Offices
6528 S. Menard Ave.
CHICAGO
Republic 0200

Southern Division
Cortez & Bienville Sts.
NEW ORLEANS
Galvez 2171

Eastern Division
455 Third Street
JERSEY CITY
Montgomery 5-2340

Essential Oils

Almond, Bitter, U. S. P.	lb.	$2.25	$2.50
Bitter, F. F. P. A.	lb.	2.50	2.75
Sweet, cans	lb.	.55	.57
Anise, cans, U. S. P.	lb	.40	.42
Apricot, Kernel, cans	lb.	.20	.22
Bay, tins		1.30	1.70
Bergamot, coppers	lb.	1.60	2.00
Artificial	lb.	1.05	1.15
Birch Tar, rect., tins	lb.	.45	.50
Crude, tins	lb.	.12	.13
Bois de Rose, Brazilian	lb.	.95	1.10
Cayenne	lb.	2.50	2.75
Cade, cans	lb.	.24	.26
Cajuput, native, tins	lb.	.47	.50
Calamus, tins	lb.	2.75	3.25
Camphor, Sassy, drums	lb.	—	.11
White, drums	lb.	—	.15
Cananga, native, tins	lb.	2.00	2.05
Rectified, tins	lb.	2.50	2.55
Caraway Seed	lb.	1.75	1.80
Cassia, Redistilled, U. S. P.	lb.	1.10	1.15
drums	lb.	—	1.05
Cedar Leaf, tins	lb.	.67	.72
Cedar Wood, light, drums	lb.	.29	.33
Citronella, Java, drums	lb.	.44	.51
Citronella, Ceylon, drums	lb.	.38	.39
Cloves, U. S. P., cans	lb.	.89	.94
Eucalyptus, Austl., U. S. P., cans	lb.	.23	.25
Fennel, U. S. P., tins	lb.	1.10	1.30
Geranium, African, cans	lb.	4.25	5.25
Bourbon, tins	lb.	4.50	5.25
Hemlock, tins	lb.	.60	.70
Lavender, U. S. P., tins	lb.	1.70	3.50
Spike, Spanish, cans	lb.	.57	.62
Lemon, Ital., U. S. P.		.90	1.20
Lemongrass, native, cans	lb.	.95	1.00
Linaloe, Mex., cases	lb.	1.35	1.45
Neroli, Artificial	lb.	10.00	20.00
Nutmeg, U. S. P., tins	lb.	1.10	1.15
Orange, Sweet, W. Ind., tins	lb.	1.20	1.35
Italian cop	lb.	1.20	1.50
Distilled	lb.	.55	.60
Origanum, cans, tech	lb.	.25	.50
Patchouli	lb.	3.00	3.50
Pennyroyal, dom	lb.	1.85	1.90
Imported	lb.	1.20	1.30
Peppermint, nat., cases	lb.	3.00	3.25
Redis., U. S. P., cases	lb.	3.25	3.50
Petit Grain, S. A. tins	lb.	1.00	1.05
Pine Needle, Siberian	lb.	.77	.80
Rose, Natural	oz.	6.00	15.00
Artificial	oz.	2.00	2.75
Rosemary, U. S. P., tins	lb.	.33	.40
Tech., lb. tins	lb.	.22	.27
Sandalwood, E. Ind., U. S. P.	lb.	5.50	6.00
Sassafras, U. S. P.	lb.	.75	1.00
Artificial	lb.	.19	.21
Spearmint, U. S. P.	lb.	1.35	1.45
Thyme, red, U. S. P.	lb.	.50	.70
White, U. S. P.	lb.	.60	.80
Vetivert, Bourbon	lb.	4.75	5.00
Java	lb.	16.00	20.00
Ylang Ylang, Bourbon	lb.	3.50	5.50

Aromatic Chemicals

Acetophenone, C. P.	lb.	$1.50	$2.25
Amyl Cinnamic Aldehyde	lb.	3.50	4.25
Anethol	lb.	1.00	1.10
Benzaldehyde, tech	lb.	.60	.65
U. S. P.	lb.	1.10	1.30
Benzyl, Acetate	lb.	.60	1.00
Alcohol	lb.	.75	1.15
Citral	lb.	1.90	2.20
Citronellal	lb.	2.25	2.50
Citronellol	lb.	2.25	3.00
Citronellyl Acetate	lb.	4.50	7.00
Coumarin	lb.	3.10	3.30
Cymene, drums	gal.	.90	1.25
Diphenyl oxide	lb.	1.05	1.25
Eucalyptol, U. S. P.	lb.	.55	.65
Eugenol, U. S. P.	lb.	2.00	2.50
Geraniol, Domestic	lb.	1.25	2.00
Imported	lb.	2.00	3.00
Geranyl Acetate	lb.	2.50	4.00
Heliotropin	lb.	1.85	2.10
Hydroxycitronellal	lb.	3.50	9.00
Indol, C. P.	oz.	2.00	2.50
Ionone	lb.	3.60	6.50
Iso-Eugenol	lb.	3.00	4.25
Linalool	lb.	1.65	2.00
Linalyl Acetate	lb.	3.00	4.25
Menthol	lb.	3.50	3.60
Methyl Acetophenone	lb.	2.50	3.00
Anthranilate	lb.	2.15	3.20
Paracresol	lb.	4.50	6.00
Salicylate, U. S. P.	lb.	.40	.45
Musk Ambrette	lb.	5.75	6.00
Ketone	lb.	6.25	6.50
Moskene	lb.	5.00	6.00
Xylene	lb.	2.00	2.50
Phenylacetaldehyde	lb.	4.00	6.50
Phenylacetic Acid, 1 lb., bot	lb.	3.00	4.00
Phenylethyl Alcohol, 1 lb. bot	lb.	4.25	4.50
Rhodinol	lb.	6.00	9.50
Safrol	lb.	.23	.25
Terpineol, C. P., 1,000 lb. drs	lb.	.33	.34
Cans	lb.	.35	.36
Terpinyl Acetate, 25 lb. cans	lb.	.75	.90
Thymol, U. S. P.	lb.	1.40	1.50
Vanillin, U. S. P.	lb.	4.50	5.75
Yara Yara	lb.	1.30	2.00
Insect powder, bbls	lb.	.28	.30
Concentrated Extract			
5 to 1	gal.	1.58	1.70
15 to 1	gal.	4.40	4.65
20 to 1	gal.	5.95	6.00
30 to 1	gal.	8.75	9.00
Gums—			
Arabic, Amb. Sts	lb	.08	.08½
White, powdered	lb.	.11	.12
Karaya, powdered No. 1	lb.	.10	.11
Tragacanth, Aleppo, No. 1	lb.	1.00	1.05
Sorts	lb.	.11	.12
Waxes—			
Bayberry, bgs	lb.	.14	.15
Bees, white	lb.	.32	.35
African, bgs	lb.	.19	.20
Refined, yel	lb.	.22	.26
Candelilla, bgs	lb.	.09½	.10
Carnauba, No. 1	lb.	.29	.30
No. 2, Yel.	lb.	.28	.29
No. 3, Chalky	lb.	.13½	.14
Japan, cases	lb.	.07¼	.07½
Paraffin, ref. 125-130	lb.	.03⅜	.04¼

Importers ***Dealers*** ***Brokers***

Olive Oil Foots
Commercial Olive Oil
Winter Yellow Cottonseed Oil
Prime Summer Yellow Cottonseed Oil

WELCH, HOLME & CLARK COMPANY, INC.
Established 1838
563 Greenwich Street **New York City**

We have been supplying raw materials to the Soap and Allied Industries for 95 years.

Nationwide Service
VICTOR
TSP

VICTOR service blankets the country. A 'phone call will bring prompt shipment of Victor free-flowing Tri-Sodium Phosphate from our nearest distributor. Write for address of nearest one . . . and for sample of the TSP that's famous for its uniform purity, its sparkling white crystals and superior mechanical condition.

VICTOR CHEMICAL WORKS
141 W. Jackson Blvd., Chicago
New York Kansas City Nashville

Terpineol

(*From Page 25*)

substances. In fact, it is not changed even by prolonged boiling. This together with its absolute permanence against the action of caustic alkali and its resistance against fatty acids makes it especially suitable for use in soap. By combination with small quantities of heliotropine, geranium, sandalwood, ylang ylang and similar oils, it is possible to obtain fine soap perfumes at very moderate cost.

TERPINEOL is used not only as the base for odor combinations in soap and other perfuming, but is also the base for numerous chemical derivatives of an odoriferous nature. Terpinyl acetate, for example, is a colorless liquid made by the action of acetic anhydride on terpineol, and has an odor not unlike a mixture of bergamot and lavender. Although it has been used to cut costs in the manufacture of lavender, it has a very definite use as a modifier in soap perfumery, especially where lavender is used. Terpinyl cinnamate, a combination of terpineol and cinnamic acid, has a persistent odor useful in new-mown hay types, and also in combination with bergamot, ylang ylang, amyl salicylate, etc., in other types. Terpinyl anthranalate is a derivitive of terpineol and anthranilic acid. It has an odor of the lily-of-the-valley type. Terpinyl formate, a combination of formic acid and terpineol, has a fresh odor which is useful in producing imitation neroli odors. Terpinyl propionate is a liquid whose odor comes quite close to approximating French lavender oil. When fixed with oleoresin orris, it is particularly valuable for giving a cheap lavender type odor.

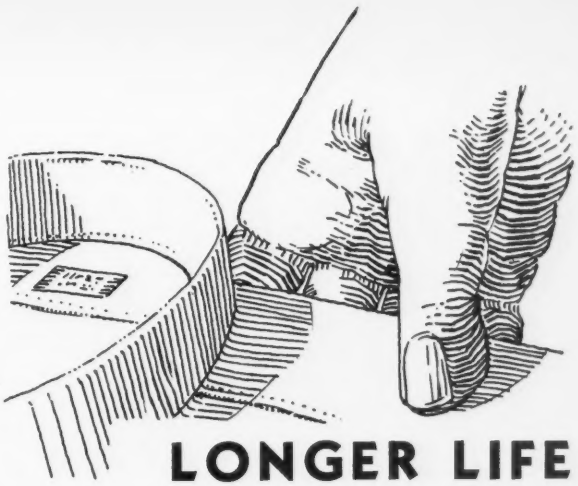
With the advent of commercial terpineol, the manufacturer of products requiring a low-cost odor had placed at his disposal a perfuming material far below anything previously available. With the natural increase in demand which came with improvement in quality and reductions in price, there is no wonder that terpineol soon outstripped all other perfuming materials in volume of consumption. Since the termination of the world war, much attention has been given to the improvement of quality in this country. Competition has held prices at low levels during the same period, so that today the consumer is getting the finest terpineol yet produced at the lowest prices in the history of the product.

——o——

Opportunities for Export

The following opportunities for export of American soaps and allied products have come to the Bureau of Foreign and Domestic Commerce, Washington, D. C. American manufacturers can secure the full details of the inquiries by communicating with the Bureau, care of the Department of Commerce. Be sure to mention the number of Foreign Trade Opportunity in writing.

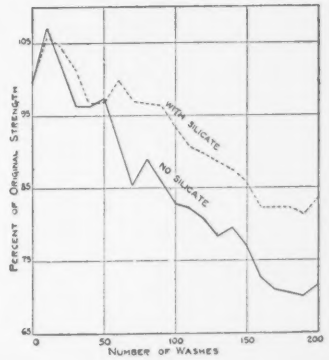
3055	Toilet soap	Germany	Agency
3085	Toilet soap	Yugoslavia	Agency
3125	Shoe polishes	Canada	Agency



LONGER LIFE
FOR THE FAMILY WASH
with P. Q. SILICATE

IN THESE DAYS of balanced budgets and thrift programs, soap users watch values carefully. Soap must wash thoroughly and *safely*. A hole in a shirt demands an explanation.

The strength of washed fabrics, bleached or unbleached, is consistently better after a series of treatments in silicate liquors than otherwise. A careful experiment on a large number of samples showed that after 200 washes at boiling temperature a cotton fiber treated with soap and sodium carbonate had about 75% of its original strength. In the presence of silicate however, the residual strength was 10% greater. The chart shows the results.



Keep your brands among the best sellers . . . with N Brand Silicate of Soda, known to soap makers for three quarters of a century.

PHILADELPHIA QUARTZ CO.
General Offices and Laboratory
121 S. THIRD STREET, PHILADELPHIA
Chicago Sales Office: 205 W. Wacker Drive
Sold in Canada by NATIONAL SILICATES LTD., Brantford, Ontario

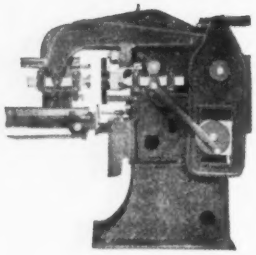
WHEN YOU NEED **SOAP MACHINERY** NEW OR USED

try NEWMAN *first!*

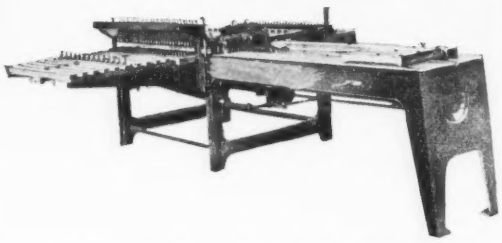
New Soap Crutchers

Here are illustrations of two of Newman's brand new all steel, steam jacketed SOAP CRUTCHERS. The CRUTCHER on the left can be used to crutch ANY kind of soap. The CRUTCHER on the right can also be used to crutch any kind of soap but is especially adapted for Crutching laundry soap. These are made in a complete range of sizes. Investigate our equipment and prices before placing your next crutcher order.

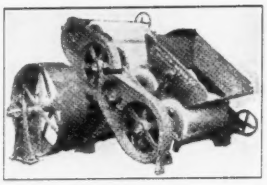
Used Specials



4 JONES AUTOMATIC combination laundry and toilet soap presses. All complete and in perfect condition.



2 Automatic Power Soap Cutting Tables.



H-A SOAP MILL

This 4-roll granite toilet soap mill is in A-1 shape. Latest and largest size rolls.

USED EQUIPMENT

- H-A 1500, 3000, 4000, 5000 lbs. capacity. Steam Jacketed Crutchers.
- Dopp Steam Jacketed Crutchers, 1000, 1200, 1500 lbs. and 800 gals. capacity.
- Ralston Automatic Soap Presses.
- Scouring Soap Presses.
- Empire State, Dopp & Crosby Foot Presses.
- 2, 3, 4, 5 and 6 roll Granite Toilet Soap Mills.
- H-A 4 and 5 roll Steel Mills.
- H-A Automatic and Hand-Power slabbers.

USED EQUIPMENT

- Sperry Cast Iron Square Filter Presses, 10, 12, 18, 24, 30 and 36 inch.
- Perrin 18 inch Filter Press with Jacketed Plates.
- Gedge-Gray Mixers, 25 to 6000 lbs. capacity, with and without Sifter Tops.
- Day Grinding and Sifting Machinery.
- Schultz-O'Neill Mills.
- Day Pony Mixers.
- Gardiner Sifter and Mixer.
- Proctor & Schwartz large roll Soap Chip Dryers complete.

USED EQUIPMENT

- Proctor & Schwartz Bar Soap Dryers.
- Blanchard No. 10-A and No. 14 Soap Powder Mills.
- J. H. Day Jaw Soap Crusher.
- H-A 6, 8 and 10 inch Single Screw Plodders.
- Allbright-Nell 10 inch Plodders.
- Filling and Weighing Machines for Flakes, Powders, etc.
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PRODUCTION SECTION
A section of SOAP devoted to the technology of oils, fats, and soaps, published prior to Jan. 1, 1932, as a separate magazine under the title, *Oil & Fat Industries*.

Liquid Soap Analysis

INCREASING interest in the manufacture of liquid soaps and the strong competition between manufacturers has demonstrated the necessity for suitable methods of analysis so that standards could be set up. German producers of liquid soaps have gone through the same experiences as American makers. The latter will naturally be interested in the analytical methods proposed by German soap chemists for analysis. The analyst is warned to sample the soap very carefully since some liquid soaps are liable to separate into two distinct layers. Furthermore, he is advised to note the physical appearance of the soap.

According to G. Knigge, writing in *Allgemeine Oel und Fett Zeitung*, the following methods have been suggested for analyzing a liquid soap. The first method is for the determination of total fatty acids. This includes the fatty acids, unsaponified fat, and natural, unsaponifiable matter. Ten grams of soap are weighed into a beaker, diluted with a little cold water and washed into a separatory funnel. The mass is acidified and extracted with ether as in the case of solid soaps. With liquid soaps, the likelihood of the presence of coconut oil has to be considered. For this method, weigh into a 100 cc. beaker 10 grams of soap, add hot water and acid to decompose, heat until both oil and aqueous layers are clear. A glass rod is placed in the beaker. Add three to four grams of high m.p. paraffin and place the beaker in an oven at a temperature of 75 to 80 degrees C., without stirring to avoid separation of oil drops, until the wax-fatty acids mixture is quite clear. The beaker is then removed from the oven and allowed to cool. The acid water is removed from underneath the cake, which is washed with water to remove acid. The washed cake is transferred to the small beaker, which is then placed in the oven for the evaporation of the water. Dabbing with a filter paper is not recommended owing to the possibility of loss. Comparison of results obtained by the ether and cake methods is given in the following tabulation:

	Ether method %	Cake method %	Difference
Sample 1	23.31	23.22	0.09
Sample 2	24.72	24.8	0.08
Sample 3	25.02	25.12	0.10
Sample 4	9.18	9.20	0.02
Sample 5	15.03	15.14	0.11

Free Alkali

Liquid soaps are prepared with potassium hydroxide and may contain potassium carbonate, formed by carbonation. If phenolphthalein is added to a solution of liquid soap in 95 per cent alcohol, a red color is almost invariably given. The method of determination is as follows. Ten grams of soap are dissolved in 100 ccm. of neutral absolute alcohol and 5 grams of anhydrous sodium sulfate are added with shaking. The flask is closed and allowed to stand for half-hour in the cold. If the clear supernatant liquid is red in color then absence of free fatty acids and presence of free alkali is indicated. The water present in liquid soaps is always sufficient to upset the free alkali test unless the above precautions are taken. For quantitative work, the alcohol and indicator must be neutral. While the solution is standing, a filter is prepared as follows. A few cc. absolute alcohol are placed in a conical flask, a few drops of phenolphthalein are added followed by a few drops of N/10 alcoholic potassium hydroxide. The red solution is poured through a filter paper which is covered during filtration. The contents of the flask below the filter are then poured away and the soap solution is filtered, keeping the filter covered with a watch-glass during filtration in order to avoid absorption of carbon dioxide. The filtrate is titrated with N/10 alcoholic HCl. The alcoholic HCl. is standardized against N/10

NaOH. In this manner a sharp indicator change is obtained.

Free Fatty Acids

If in the foregoing test the alcohol layer is colorless, the soap is either neutral or contains free fatty acids. The alcohol solution is titrated with N/10 alcoholic KOH. If the fatty acids present in the soap are very different on the average from oleic acid then the neutralization value (acid value) of the recovered fatty acids must be determined and the appropriate adjustment must be made in the calculation.

Ammonia

I norder to assist in keeping soaps liquid, ammonium salts are sometimes added to potash soaps. The presence of ammonia is detected by heating the soap with caustic soda. The ammonia if present is detected in the usual manner, by odor. To make the test, ten grams of the soap are weighed out in a 200 ccm. measuring flask. Water is added and the soap is decomposed with dilute sulfuric acid and the ammonia is converted into the sulfate. A little infusorial earth is added, the flask is filled to the mark, shaken and filtered. One hundred ccm. (equivalent to 5 grams of soap) are transferred to a conical flask. Twenty ccm. of strong sodium hydroxide solution are added and a little zinc powder to avoid bumping, and the mixture is distilled into 50 ccm. N/2 sulfuric acid. The flask is boiled until all the ammonia has distilled over. A little congo red solution is added to the acid and the free acid is titrated back. A blank test should be made.

Water

Determining the proportion of water in liquid soap is not a simple matter, because many liquid soaps con tain solvents which are partly water and partly soluble in xylol. Such solvents may be ethyl alcohol, methanol, benzine, turpentine, carbon tetrachloride, methylhexalin, decalin, ethyl glycol, etc. Xylol distillation does not therefore always give the desired information. The first step is the determination of the volatile matter at 105° C. This is done on a ten gram sample, weighed out on a dish containing dry sand and a glass rod, previously dried and weighed. The liquid soap is heated to dryness while stirring on a water bath and there, after dried to constant weight in an oven at 150° C. The weight may be accepted as being constant when the further loss is not greater than 0.1 per cent in fifteen minutes. The loss so determined includes water insoluble solvents and alcohol.

Alcohol

To detect the presence of alcohol, the soap is warmed gently with dilute HC1 until the fatty acids separate. From the liquid a portion of the aqueous layer is removed by means of a pipet and run into a test tube and a crystal of iodine and a little concentrated KOH is added. The odor of iodoform developed on warming indicates the presence of alcohol. In the quantitative determination, 100 ccm. of the soap is decomposed with dilute sulfuric acid and two-thirds of the aqueous solution is distilled over. The distillate is placed in a separatory funnel, where the aqueous layer is allowed to settle. This is then run off into a 100 ccm. measuring flash. The contents are made up to the mark with water and the specific gravity is determined. The alcohol content of the soap can then be read off tables.

Other Volatile Solvents

The soap is decomposed in the usual manner with sulfuric acid and the decomposition product is distilled. A graduated tube is placed over the end of the condenser into which the distillate is run. When distillation is completed, the volume of solvent separated is read off and its specific gravity determined. Determination of the boiling point, optical constants, odor, etc., will aid in identifying the solvent.

Ash

Five grams of soap in a platinum crucible are evaporated on the water bath, dried in an oven at 105 degrees C. and ignited over a small flame. A grain of ammonium carbonate is added and the mass re-ignited again. The ash is weighed. Chlorides in the ash are shown by testing with silver nitrate. A rapid method for determining them consists in dissolving two grams of soap in water, adding an excess of 10 per cent of magnesium nitrate. The precipitate is filtered off and the filtrate collected in a porcelain dish, while the precipitate is washed with water. A few drops of potassium chromate are added and the cholorides are titrated with N/1 silver nitrate solution until a red color is obtained.

Sugar

Sugar is used at times in building up the body of liquid soaps. (Now not common in American practice.—Ed.) The sugar is decomposed with dilute HC1 into invert sugar. The presence of sugar is detected by boiling the soap with HC2 and removing the separated aqueous layer. This is neutralized and tested with Fehling's solution. In the presence of sugar red cuprous oxide separates out after a few minutes warming. For the quantitative determination of sugar, the fatty acids are split off from the soap by means of HC1 (boiling for half an hour). Wax is added and the whole mass is cooled. The wax-fatty acid cake is removed, washed and the sugar is then determined volumetrically with Fehling's solution.

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Oil is obtained from animal materials by continuous pressing. The coarser solid products are separated preferably by means of a rotary strainer with automatic purifying devices. Then the oil is separated from the water in continuous centrifugal separators with nonperforated walls on which the solid impurities settle and are removed periodically. Aktiebolaget Separator. Swedish Patent No. 72,964, filed October 27, 1931.

Taurin in Making Washing Compounds

Taurin and its derivatives, such as butyltaurin, methyltaurin, phenyltaurin, are used for making washing agents, emulsifiers and wetting compounds. Thus 18.5 parts by weight of butyltaurin in 100 parts of water are mixed with 20 parts of isocyanate obtained from lauric acid chloride and alkali azides. The latter is allowed to run into the butyltaurin at 70 degrees C with strong agitation. After all the isocyanate has been added, the mixture is stirred for an additional half hour. The thinly viscous paste, obtained in this manner, may be used directly as a detergent. A 0.1 per cent solution lathers very well and possesses effective detergent action even in hard water of 30 degrees standard hardness. Isocyanate obtained from oleic acid or stearic acid may also be used. I. G. Farbenindustrie A.G., Frankfurt-am-Main, Germany. German Patent No. 573,192, filed January 14, 1932. (Taurin formed by action of acids on bile.—Ed.)

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Aluminum in Soap Powder Process

Soap powder is made from soap and sodium carbonate not by the usual mechanical means nor by atomizing the liquid mixture into a cooled chamber, but by the addition of aluminum powder to the soap paste containing alkali carbonate. The usual processes for making soap powder have always been burdensome to carry out and expensive, requiring expensive apparatus and strict control of concentration, temperature, water content, pressure and speed of rotation of the atomizing device. The new process avoids all these disadvantages. When aluminum powder is added to the liquid soap mass, reaction takes place with the evolution of hydrogen gas and the conversion of the metal into the aluminate. The escape of the gas swells the volume of the soap mass, and the amount of this volume increase can be regulated by using the correct excess of alkali in the soap and by the addition of sufficient aluminum powder. The product that is finally obtained at the end of the reaction and after cooling is an extremely fine, highly voluminous, floculent, easily dried soap powder. A tallow soap or a coconut oil soap base may be used, containing approximately half a per cent of free alkali and soda and 0.15 per cent of aluminum powder is added. Herbert Vohrer. German Patent No. 573,818, filed July 19, 1931.

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Glycerin esters, which are combined chemically with albumen in the form of lipoids, cannot be removed from crude vegetable materials by means of volatile solvents. They are, however, dissolved out when a small quantity of an organic acid split off from these lipoids is added to the usual solvents. These organic acids have a methyl group, substituted by one or more halogens, or an aldehyde group in the alpha-position with respect to the carboxyl group. Such acids as chloroacetic or glyoxylic may be used. French Patent No. 711,144.

Fatty Acids from High Iodine Oils

Fats, oils or fatty acids of high iodine number, such as linseed oil, sunflower seed oil, hemp oil, fish oil and the like, are treated with five to ten per cent of concentrated sulfuric acid in the presence of sufficient proportions of aromatic hydrocarbons, such as benzene, toluene, xylene, and solvent naphtha. These hydrocarbons may be used alone or dissolved in hydrocarbons of higher molecular weight, such as naphthalene, phenanthrene, anthracene. The lower molecular weight hydrocarbons may also be replaced by hydrogenated naphthalene, phenol or cresol. Sulfuric acid is added to this mixture in small quantities with constant agitation. The reaction mixture is cooled if necessary. After all the sulfuric acid has been added, the mass is agitated for eight to twelve hours. Then 35 to 50 per cent water is added. The diluted mixture is heated to 40 to 50 Degrees C. and allowed to stand again. After the sulfuric acid has been well separated from the mixture, 40 to 50 per cent of water is again added and also one to two per cent of naphtha-sulfonic acid, octohydroanthracene-sulfonic acid, cymol-sulfonic acid or other splitting agent. Then the mixture is agitated

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Structure of Soap

Sodium stearate exists in the form of needle-shaped and leaf-shaped crystals. Some of the crytals resemble those of stearic and palmitic acids. They are deposited from solutions in alcohol. They are regarded as free acids, since they were most abundant when the conditions are favorable to hydrolysis and are not formed in the presence of hydroxyl and other ions. The addition of potassium stearate and potassium palmitate first caused the turbid liquids to clear up to a certain extent due to the repression of hydrolysis, but further addition caused gradual salting-out. The effect of heating and sudden cooling in a freezing mixture of solid carbon dioxide and ether was the slow formation of colloidal particles, which showed active Brownian motion. The amount of hydrolysis in water was measured by determining the quantity of alkali in the solution after titration. E. Kratz. *Chemiker Zeitung*, volume 49, pages 650ff.

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Hydrogenation of Linseed Oil

Selective hydrogenation of linseed oil refers to the conversion of the less saturated compounds into esters of oleic acid and its isomerides before the latter are further hydrogenated to stearin. Hydrogenation experiments were carried out with the Lush catalyst and apparatus. The product is a white solid. Analysis showed that the rate of hydrogenation of linolenic acid is much higher than that of linoleic acid. The percentage of oleic acid and isoleic acid found is very small, whereas the increase in the percentage of saturated acids is noticeable from the start. N. E. Cocchinaras. *Journal of the Society of Chemical Industry*, 1932, pages 403 to 404T.

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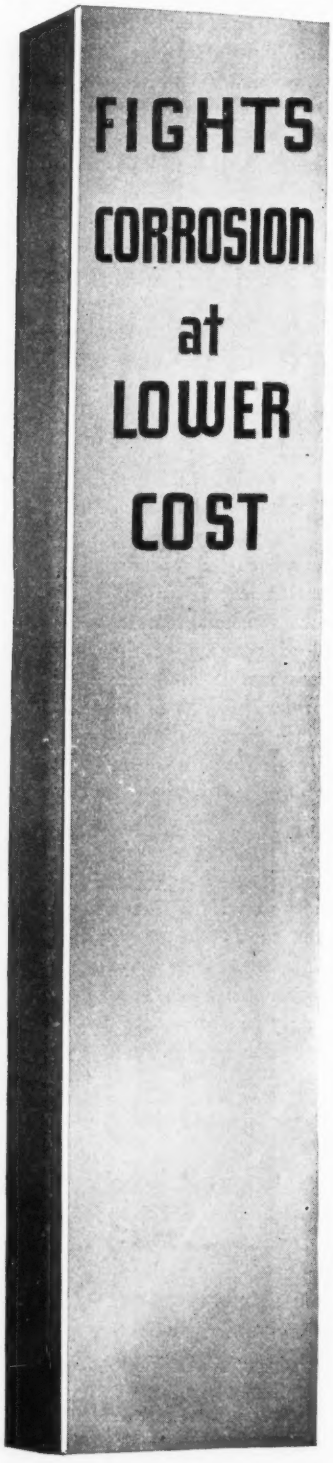

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Determining Lanolin in Toilet Soaps

Superfatted soaps often contain lanolin, particularly when these soaps are of a medicinal nature and contain medicaments which are intended to penetrate the skin. Nevertheless, it is held that the supposed action of the superfatting agent in neutralizing the alkali, that is set free when the soap hydrolyzes in water, does not take place. The superfatting agent reduces the tendency of the soap lather to absorb oil from the skin. Lanolin is used when the soap is required to have a particularly strong softening effect on the skin. It can be incorporated not only with milled toilet soaps but also with cold-made soaps.

During the course of examining a lanolin soap, which looked exactly like a milled soap but which was afterwards found to be a cold-made soap, Dr. G. Knigge had an opportunity of testing various analytical methods. He has describe dhis results in an article published in *Die Seifen, Oel und Fettindustrie*, 1933, pages 133 to 134. According to Dr. Knigge the present methods are too inaccurate for this purpose. Air-dried soap chips were used, the fatty acid content being 86.5 per cent, the saponification number of the fatty acids 219.2. A 450 gram sample of the soap chips was mixed with 50 grams of lanolin. The mixture was passed thrice through a milling machine. Ten grams of the soap were then dissolved in water, precipitated with calcium chloride solution. The precipitate was dried at 60 degrees C and extracted in an ordinary Soxhlet apparatus with ethyl acetate. Eight per cent extract was obtained after 12 hours. The residue in the Soxhlet thimble was ground in a mortar and mixed with sand. Another 0.8 per cent of extract was obtained after an additional six hour extraction. This showed only 8.8 per cent lanolin, while ten per cent was added originally to the soap. In another test the combined lanolin and fat in the soap was found to be greater than that original added. Other experiments were made with the aid of the Twisselmann apparatus, a rapid extraction device and the final conclusion was that the present methods are all unsuitable for determining lanolin in soap in the presence of unsaponified fat by extraction of potash soap with ethyl acetate. Nevertheless, the author believes that he has laid the foundations for the development of an accurate method for this purpose and proposes to report on it later.

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Proportion of foots in vegetable oils depends on temperature and the time of standing. Deposit starts to shrink after standing 96 hours. Dilution of the oil with solvents accelerates precipitation of the foots and also changes the absolute quantity of the latter. The foots in oils should be determined by diluting the oil 1:1 with benzene in a 100 cc. graduated tube and noting the volume of the deposit after it stands 4 hours. L. Jolson and V. Ivanov. *Masloboino Zhirovoe Delo*, 1932, number 3, pages 31 to 35.

New Process for Whale Oil

An improved process for the recovery of oil from whale blubber and similar material has recently been perfected by E. Olsen, a Norwegian inventor. The liquid formed in each of a number of steam pressure digesters flows through separate pipes into a common separating tank maintained at the digestion pressure and large enough to receive all the liquid products from at least one digester. The digesters are charged with blubber, etc., closed and placed under steam pressure.

The bloodwater which first separates is blown off through a pipe, and the liquids which subsequently separate are pressed through a valve into the separating tank to which steam is admitted by a pipe, and which is fitted with perforated baffles to assist in the separation of oil. The oil is drawn from the dome by a pipe. Sight glasses are fitted in the connecting pipe. The level in the tank is controlled by drawing off water through valves or pumping in water.

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Hydrogenation of Fish Oils

Marine animal oils have to be refined to remove constituents that poison the catalyst in the hydrogenation process. Attempts to hydrogenate the crude oils were unsuccessful owing to the poisonous action of the protein and phosphatide constituents of the oil. These can be eliminated to a sufficient degree by refining the oil with a weak solution of sodium hydroxide, containing sodium chloride. Satisfactory results were obtained by using a sodium hydroxide solution of 2 to 3 degrees Be concentration, containing eight to ten per cent of sodium chloride in solution. The temperature of the process was 95 to 100 degrees C. The duration of the operation was a couple of hours. For highly acid oils the proportion of alkali used should correspond to the free fatty acids of the oil, but in the case of only slightly acid oils a quantity of alkali somewhat greater than the theoretical should be used. This is due to the alkali requirements of the phosphatides and albumenous constituents of the oil, which, while negligible in comparison to those of a highly acid oil, form an appreciable proportion of those of a nearly neutral oil. A. Zinoviev, O. Halatov and E. Pavlov. *Maslobinoi Zhr. Delo*, 1933, number 2, pages 12 to 16.

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Corn oil or other animal or vegetable oil or fat, which contains some free fatty acid and coloring matter, is treated with a concentrated solution of alkali, such as a 25 degree Be solution of sodium hydroxide. This is added in sufficient proportion to neutralize the free fatty acid, but not more than five per cent in excess of such quantity, and the fatty acid soap that is thus formed is dried under a vacuum. After the soap has been separated from the mixture, the latter is further treated with a dilute solution of alkali, such as a three degree Be solution of sodium hydroxide, in order to separate the coloring matter. American Lurgi Corporation. United States Patent No. 1,880,383.

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Refining Castor Oil

Caustic alkalies are used in a new refining process, developed and reported used on a large scale in Russia, according to R. Heublum, writing in *Allgemeine Oel und Fett-Zeitung*, 1933, pages 77 to 78. According to the author, while the presence of a large proportion of albumenous and mucilaginous substances in oils generally complicates the refining process due to the formation of troublesome emulsions, the exact opposite is true with castor oil. The addition of albumenous substances to a comparatively pure oil gives a product that settles easily. Hence the practice for four years has been to refine the pressed oil directly without preliminary filtration.

The oil is first warmed to 30 to 35 degrees C and then caustic soda solution of 10 to 12 degrees Be concentration is added through a spray nozzle. At the same time the agitators are started at 50 to 60 R.P.M. and the oil is heated again. This is accomplished by direct steam. When all the caustic soda has been added, which takes approximately half an hour, the speed of the agitators is reduced and the heating of the oil is continued, so as to prevent disintegration of the flocculent masses in the oil. After the oil has reached a temperature of 65 degrees C, the agitators are stopped altogether and the oil is allowed to remain at rest without further heating. Better separation is obtained, particularly when the castor oil originally contains considerable impurities, by salting-out the soap formed with common salt while the addition of caustic soda is accelerated.

After three to six hours the settled soap stock is removed and the oil is washed with hot water (condensate) at 80 degrees C. to which one to one and one-half per cent salt (figured on the weight of the oil) is added. Washing is repeated three times with or without salt. The quantity of wash water used in each case is 40 to 50 per cent of the weight of the oil. The oil is heated to 90 degrees C during the washing process with the agitators working at 20 to 25 R.P.M. After agitation for about one hour, the oil is allowed to remain quiescent for two to three hours. The oil is then dried at a temperature of approximately 75 degrees C in a vacuum. Thereafter it is bleached and filtered. The oil, which is refined according to this process, is light yellow in color, perfectly transparent and does not become cloudy when kept in the cold.

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Perborate in detergent compositions is determined by dissolving one gram of the product in 150 cc. of water at 35 to 40 degrees C. The solution is then poured with shaking into 100 cc. of 2-normal solution of sulfuric acid containing about one gram of $FeSO_4$. $(NH_4)_2SO_4$. $.6H_2O$ (Iron-ammonium alum). The ferric ion produced is titrated with 0.05-normal solution of titanium trichloride with potassium sulfocyanide as indicator. A. Ringbom. *Zeitschrift fuer Analytische Chemie*, 1933, volume 92, pages 95 to 101.

Separating Liquid and Solid Fatty Acids

Liquid and solid fatty acids can be separated in simple manner when neutral fats and their fatty acids, dissolved in alcohol or other suitable solvent, are treated with hydroxides or oxides of a metal or alkali earth metal and of an alkali metal. Thus soluble and insoluble soaps are formed, which are separated by filtration. The solid fatty acids form principally difficulty-soluble, heavy metal soaps and the liquid fatty acids soluble alkali soaps. For example, 250 kilograms of bone fat are heated for three hours in admixture with 238 liters of alcohol, 22.75 kilograms of lime hydrate containing 74 per cent lime, 31.5 liters of 40 per cent sodium hydroxide solution and 47 liters of water in a suitable vessel with reflux condensing. After cooling down to 55 to 60 degrees C, the solution is filtered to remove precipitated salts of the solid fatty acids. The residue is digested with alcohol and filtered again. The clear filtrate is diluted with one-third its volume of water and the solution is then acidified with sulfuric acid in sufficient quantity to cause the waste lye to react acid. The olein and the waste lye are separated; the olein is cooked with water and the water is then removed in the usual manner. Bamag-Meguin A.G., Berlin, Germany. German Patent No. 540,622.

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Action of Light on Fats

Mechanism of the reactions involved in rancidity of fats exposed to light has been studied. The action of light consists in accelerating oxidation of the fat. Irradiation in the complete absence of oxygen is incapable of producing rancidity. Various foodstuffs containing fats were tested. The samples were subjected to various intensities of illumination, such as direct sunlight, diffused sunlight, light from 100-watt lamp. It was found that both ultra-violet and visible light greatly accelerate the oxidation of fats, ultra-violet being probably the more effective. The time of the year has an important effect because of variation in the ultra-violet component of sunlight. Of the visible spectrum, the light in the yellow-orange region at about 6,000 to 6,500 wave length is the most active, and the green between 5,000 and 5,500 wave length and the far red the least active. In using colored wrappers to protect foodstuffs from photochemical oxidation, the light transmission curve should be determined by means of a spectrophotometer in order to ensure that the most active wave lengths are really cut out. Colin H. Lea. *Journal of the Society of Chemical Industry*, volume 52, 1933, pages 146 to 149T.

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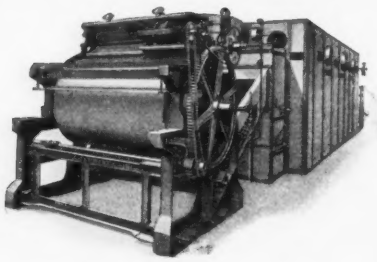
Polymerized oils, which are suitable for making soap, are obtained by heating oils to temperatures not more than 100 degrees C. in the presence of hydrofluoric acid. The extent of the polymerization is controlled by varying the quantity of hydrofluoric acid, the concentration of the acid, the duration of the treatment and the temperature. K. Fredenhagen. German Patent No. 551,787.



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ON PRODUCTS AND PROCESSES

Water-soluble, organic acids were determined in sunflower seeds by a modification of the Luers method. High grade sunflower seeds examined gave 3.6 acidity in the kernels and 2.3 in the husks (expressed in ccm. of normal alkali per 100 grams of dry material). Acids present were found to be citric, tartaric and chlorogenic. Acids tested for and found absent were formic, acetic, butyric, oxalic, malic, succinic and lactic. A. Goldovskii and A. Bogenko, *Maslobinoi Zhr. Delo*, 1933, number 1, pages 13 to 20.

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To make technical stearin, substantially completely hydrogenated sperm whale oil is melted with twice as large a proportion of solid alkali such as sodium hydroxide, potassium hydroxide or caustic lime as would be theoretically required to saponify the oil. Calculation is made on the basis of the saponification number. The resulting soaps are treated with mineral acids, such as sulfuric acid. Walter Schrauth. United States Patent No. 1,904,546, dated April 18, 1933.

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A substance for purifying, bleaching, deodorizing, decolorizing and clarifying fats and oils of animal, vegetable and mineral origin is obtained by digesting siliceous matter with an acid solution, then with a hot alkali carbonate solution. The residue is separated while still hot and the solution is treated with carbon dioxide, cooled to form a siliceous precipitate which is separated from the solution. The product is an activated silica. General Chemical Co. Canadian Patent No. 331,125, dated March 21, 1933.

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Analysis of sulfonated oils is discussed in full and special attention is paid to the Schindler fractionation. Although this is a very complicated procedure for use as a standard method for the quantitative analysis of sulfonated oils, it is recommended that it receive further study. It furnishes valuable information when a complete examination of an oil is required and sheds light on present methods of analysis. Modifications may be necessary because there are several difficulties. One of these is the examination of sulfonated oils containing mineral oil. Another is the satisfactory separation of oxidized fatty acids from non-oxidized fatty acids. D. Burton and G. F. Robertshaw. *Journal of the International Society of Leather Trades Chemists*, volume 17, 1933, pages 3 to 16.

Liquid ammonia is used for treating fats and oils, such as coconut oil, to remove the free fatty acids and other impurities. The process may also be used on other animal and vegetable fats and oils, waxes and resins. Ludwig Rosenstein. United States Patent No. 1,900,132.

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Refined pilchard oil may be hydrogenated in two stages in the presence of a nickel catalyst. The rate of reaction curve in the two stages is mainly of the linear type. The apparent resemblance of the hydrogen absorption curve to the unimolecular type under the conditions of the experiments cannot be assigned to the accumulation of impurities in the reaction flask. The relation between (n) and the iodine number of the oil hydrogenated to varying degrees is parabolic rather than linear. The decrease in iodine number with absorption of hydrogen proceeds at an approximately constant rate over each stage of the hydrogenation but it is not the same for both stages. H. N. Borcklesby and F. Charnley. Contribution Canadian Biol. Fisheries, volume 7, 1933, pages 523 to 525.

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Extremely hydrophile substances, which are miscible with water and mineral and/or fatty oils, are obtained by hydroxylating the unsaturated alkyl esters of liquid waxes, such as sperm and bottle-nose whale oils. This treatment may be effected with the aid of sulfuric acid at a temperature of —5 to zero degrees C, or it may be obtained with Caro's acid, hypochlorous acid, halogens and the like. It is followed by hydrolysis with steam at 90 to 100 degrees C. The products which are obtained by this process are useful for dressing, waterproofing and impregating leather. Deutsche Hydrierwerke A.G. British Patent No. 388,630, filed June 13, 1932.

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Fish oils, particularly those obtained by steam distillation, are purified by treatment with a mash containing soda, clay and lime in an aqueous suspension. Codliver oil can be treated by this process. A. A. Wille. Norwegian Patent No. 51,072, filed November 3, 1931.

—o—

Soap composition contains soap, mixed with calcined sodium carbonate. It is treated with ozone and benzaldehyde to obtain a product of outstanding detergent properties. L. B. Rasmusson. Swedish Patent No. 70,883, filed December 31, 1930.

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SILICATE OF SODA
ESTABLISHED 1869
MECHLING BROS. CHEMICAL COMPANY
PHILADELPHIA • CAMDEN, N.J. BOSTON, MASS.

What Future for Glycerin?

(*From Page 23*)

made by impregnating fabric and paper with varnishes containing these resins.

Ethyl alcohol of 95 to 96 per cent concentration can be prepared from weak (5 to 10 per cent) or from 93 to 94 per cent solution with the aid of glycerin. The water absorptive property of glycerin is highly effective in this application. Commercial plants are operating on this process. It is claimed that crude saponification glycerin can be used for the production of industrial alcohol by this process.

Glycerin finds many applications in the manufacture of cements and adhesives. Glycerin-litharge cements are quick setting, attain great hardness with an exceedingly low contraction on setting, withstand a high degree of heat, are resistant to practically all dilute acids, and withstand all organic solvents. These cements, containing generally about equal parts of 70 per cent glycerin and litharge, are used in luting digesters, cementing glass joints in aquariums, jointing iron pipes and porcelain fittings, producing coin impressions, making foundation of stamping machines, cementing ornamental stonework where great delicacy of line is required, producing cuts for printing and photographic purposes, and for molds for electrotyping and casting metal work in general. These cements are also claimed to be excellent for leather belts and bands for machinery. Brake linings are made by incorporating asbestos with glycerin-litharge cement. Glue does not make textile materials adhere to metallic surfaces, but when glycerin is added an excellent adhesive is obtained for this purpose. Glycerin also preserves the glue. Glycerin is also used in making adhesives for envelopes and mucilages. A strong adhesive for glazed surfaces is obtained by mixing glycerin with gum arabic, gelatin and camphor. Mixtures of glycerin and gelatin are used for imbedding microscopical specimens for examination. Razor sharpening compositions are made from equal parts of glue, glycerin and gum in water. Bottle sealing compositions consist of equal parts of gelatin, glycerin and zinc oxide in water.

MANY uses are found for glycerin in the ink industry. Glycerin is found in inks used for stenciling, copying, printing hectographic work, stamping, typewriting, plate printing and in compositions for printers' rollers. A mere trace for preventing mold formation is used in writing inks. Its powerful solvent properties, particularly for anilin dyestuffs, its antiseptic action, high viscosity, giving body to the ink, its hygroscopicity and low volatility, preventing the inks from drying out too rapidly, make glycerin very useful for high grade copying and hectographic inks. Glycerin in copying inks, containing iron gall and logwood, arrests any oxidizing activity. Stamp-pad inks contain up to 20 per cent glycerin. Crude glycerin is used in stencil inks, since the salts in the glycerin assist in retaining some of the moisture and prevent the product from drying out excessively and forming a hard mass. Ten per cent glycerin is generally found in engravers' inks, used on stone, wood or metal for lithography, chromolithography and autography.

The textile industry uses glycerin as a sizing agent in preference to chlorides of calcium and magnesium which cause tendering of the cloth in the finishing process. It is also used to size rayon, its function in this case being to increase the tenacity and resistance to friction in weaving. According to British Patent No. 261,099, it is used as an ingredient of printing pastes for printing viscose fabrics in dull and lustrous effects. A new process of making cuprammonium rayon (see United States Patent No. 1,901,590) uses one per cent glycerin in the precipitating bath to prevent the precipitation of copper while the rayon filament is being coagulated. Glycerin is used as an ingredient of hard soaps used in the dye bath for dyeing indigo serges to give a better handle to the woolen fabric. It is also used in waterproofing processes, (see United States Patent No. 1,625,672), in the manufacture of felt and in bleaching textile fabrics.

Glycerin is used in the rubber industry as an ingredient of the mix for external treatment and as a devulcanizer. It improves the ageing properties of rubber. It is used as the center filling of golf balls. Preservative coatings for vulcanized rubber are made from mixtures consisting of glycerin, benzaldehyde, talc in a paraffin-rubber solution. It is also used for filling the hole core used in building-up tires, as it can stand high temperatures without decomposition.

Glycerin finds important use in photography in making photographic emulsions. It is used for preserving the flexibility of moving picture films and as an ingredient for the production of varnish solvents used in coating films.

It has been used in the past as a covering over gasoline in storage tanks to prevent loss of gasoline by evaporation. The composition is in the state of a foam containing ten to sixty per cent of glycerin as well as glue and water. The function of the glycerin is to keep the preparation moist.

As a low freezing lubricant it is used for lubricating switch locks and the like on railroads, and as a lubricant in petroleum manufacture and refining. It softens vegetable parchment to increase its pliability for wrapping foods. It is found in liquid cleansers and polishes (see United States Patent No. 1,758,317). According to United States Patent No. 1,871,842 it is used in compositions for moistureproofing, greaseproofing and acidproofing paper. It is also employed in making marbled and surface coated papers. It is present in artists' colors as a softening agent. It prevents the shrinkage of wooden molds and vessels, is an ingredient of modeling clay, used in the manufacture of shoe blackings, in the construction of mercury manometers, in the manufacture of hats. It gives a freely-spraying albumen (glue) coating composition (see United States Patent No. 1,844,679). It is used for extracting perfumes from flowers.

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FREE
with 15 Gallons of CONCENTRATED NOX - KWIK for special DETHATOR VAPORIZER

DETHATOR VAPORIZER retails at $12.50

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15 gallon drum of CONCENTRATED NOX-KWIK INSECTICIDE SPRAY

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LUSTER BRYTE WAX — NO RUB water emulsion wax (liquid). Requires no buffing after application . . . dries glossy in 10 to 15 minutes . . . contains high percentage of Carnauba Wax . . . cuts labor costs to a minimum . . . neutral, no excess alkali. In 65, 35, 15, 10, 5 gal. drums and 1 gal. cans.

AERZONATOR BLOCS are extremely hard — hence longer life . . . contain 100% para, finest essential oils. Six popular sizes, 3½—4—8—16—25 or 40 ozs.

MOTHOBLOCS kill and repell moths and their larvae (send for special report of National Laboratories) . . . furnished in individual 4 oz. size hang-up, cardboard containers, or large sizes with metal wall containers.

NEUTRODOR URINAL BLOCETTES packed in lithographed metal tubes, either with or without our name . . . space left for dealer's name . . . muffin shaped, 4 oz. Cellophane wrapped . . . *not soluble* in moisture . . . packed 12 blocettes to a tube.

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SOAP DEPT. liquid toilet soaps, mechanic's soap, scrubbing soaps, green oil soaps, shower bath soaps, automobile soap.

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DISINFECTANT DEPT. coal tar products (co-efficient 1 to 20), pine oil products, chlorine products, live stock dips, cresol compound U. S. P., or Technical, formaldehyde, odorless disinfectants, perfumed sprays.

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SPECIALTIES DEPT. indoor chemical toilets, sprayers (hand and power), drinking fountains, aerzonator air conditioners, vending machines and sanitary napkins.

MISCELLANEOUS formaldehyde fumigators, chemical pipe cleaner, deodorizing powders, sweeping compounds, toilet bowl cleaners, weed killers, gum removers, ratacides.

INSECTICIDE DEPT. liquid exterminators, powder exterminators, mosquitocides, gas fumigating machines, vaporizers, concentrated insecticides.

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To the Insecticide and Disinfectant Manufacturer:

Your selection of basic materials from the following Monsanto list is assurance of ultimate satisfaction.

SANTOCHLOR
(Pure Paradichlorbenzene)

METHYL SALICYLATE
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PHENOL

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(All Grades)

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REG. U.S. PAT. OFF.

Pyrethrum Products

CORRECT milling is vitally essential in the manufacture of high grade pyrethrum products. Loss in killing power, which was present in the original flowers, is the most common and serious consequence of faulty milling. Grinding pyrethrum in an ordinary drug mill is, for example, almost certain to cause loss in strength as a result of high temperature and oxidation of the toxic value.

POWCO BRAND Pyrethrum Products are produced in specially built equipment, designed and used *exclusively* for pyrethrum, — a milling process, backed by years of specialization in pyrethrum, which protects the killing power of the flower, thus assuring full strength in all POWCO BRAND Pyrethrum Products.

"KILLING POWER—THAT'S THE THING!"

JOHN POWELL & CO., Inc.

Specialists in Pyrethrum Products

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With the Line Closest Allied to Soaps and Cleaners

The FEDERAL LINE

of Floor Preserving and Polishing Materials

YOUR MARKET AWAITS YOU

Your present customers buy soaps and cleaners from you to use on surfaces which will have to be finished or polished after cleaning. Why not sell 100% of their requirements instead of 50%?

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A Corner of Our Laboratory

HIGHEST STANDARDS OF QUALITY STRICTLY MAINTAINED

Standard uniform quality is assured in every Federal product by strict laboratory control. The finished product must at all times be uniform in all its physical properties and must be identical to the original standards accepted and approved after long and rigid tests.

THE ONLY COMPLETE LINE

We are the only manufacturer able to offer you a complete line of specialized products for every kind and type of floor. That is only possible because we have spent years working in close co-operation with manufacturers of various types of floorings to perfect the proper preserving and polishing material for each kind of floor. Our company today is America's largest producer of floor preservatives and polishes selling in bulk.

Let us tell you what we have to offer you to reach this big field for increased sales and profit.

Write us today.

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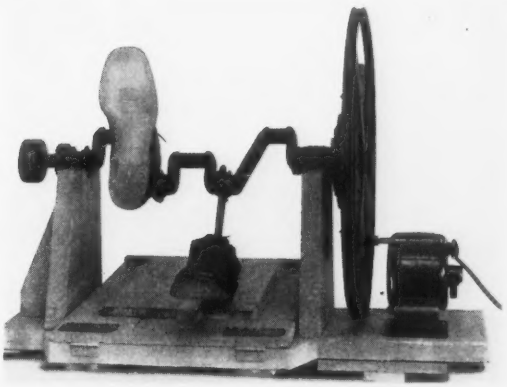
A SALES POLICY THAT MEANS MORE BUSINESS FOR YOU

Our sales policy allows you to build up and expand your business. We distribute our products in bulk at lowest prices to soap, chemical and disinfectant concerns, who in turn re-can and merchandise the products under their own brand names and labels.

From our long experience in developing other distributors, we know how to educate and equip your sales force with the necessary knowledge to do a real selling job on our line. This co-operation is yours when you take on the Federal Line.



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Please send complete details of Federal Floor Preserving and Polishing Materials and explain your sales plan.

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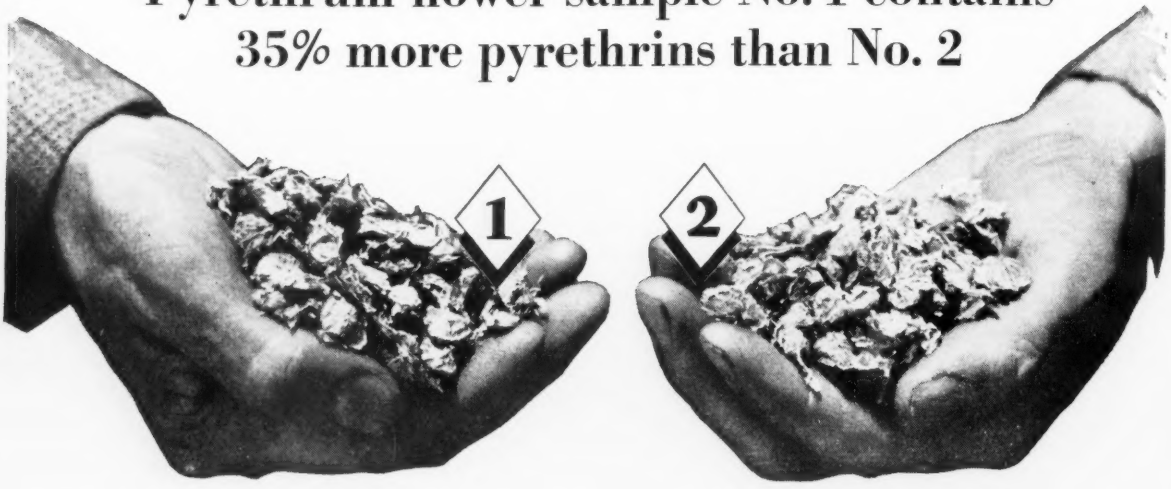
THEY LOOK ALIKE . . *but* . . .

Wheat sample No. 1 contains 33⅓% more protein than No. 2

TO THE EYE, there's no difference between these two wheat samples. Yet a laboratory test reveals 33⅓% more protein in Sample No. 1. Wheat buyers therefore pay more money for Sample No. 1. It contains more protein—more value.

•

Pyrethrum flower sample No. 1 contains 35% more pyrethrins than No. 2



TO THE EYE, there's no difference between these two handfuls of pyrethrum flowers. Yet one lot has a pyrethrin content of .65% and the other has a pyrethrin content of 1.00%.

Natural products are always different. If you buy pyrethrum flowers on the open market, it's impossible to know in advance how the flowers will test. We have found it unwise to depend on exporter's guarantees, unsupported by the assay of a competent chemical laboratory. For that reason, we've established our own exclusive laboratory in Japan to select our flowers for us at the point of harvest.

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There's NO GUESSWORK

about the KILLING *Power*

of PYROCIDE No. 20

THE Pyrocide 20 story is very simple. There's no secret. Here's our guarantee:

Pyrocide 20 is guaranteed to contain 2.15 grams of pyrethrins per 100 cc. (2.61% pyrethrins.) Each gallon contains all the active principle from 20 pounds of flowers having a pyrethrin content of .90%. This is the guarantee you receive when you buy Pyrocide 20.

PYROCIDE 20 is shipped in steel drums of 15, 30 and 53 gallons from warehouses in New York, Los Angeles, Minneapolis and several foreign cities. We can also supply pyrethrum flowers of known pyrethrin content in whole, ground or powdered form.

REMEMBER, *if you want to be sure of your finished product, use Pyrocide 20!*

Write today,

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Pyrethrum Specialists Since 1901

PYROCIDE 20

STANDARDIZED EXTRACT OF PYRETHRUM FLOWERS

DEO-BASE

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Deodorized Base for Fly Sprays

DEO-BASE is a petroleum oil refined to complete freedom from kerosene odor. It is the best product available today for use in insecticide liquids applied by sprayers or vaporizing machines.

All insecticide sprays made with DEO-BASE have found ready acceptance by fastidious housewives, highest class hotels, bakeries, dairies, food markets . . . in fact, wherever the odor of ordinary sprays has been found objectionable.

DEO-BASE therefore offers you new sales opportunities and increased profits.

DEO-BASE is especially well adapted for use with *odorless* Pyrethrum Extract now obtainable from leading manufacturers.

DEO-BASE conforms in every detail with the specifications of the National Association of Insecticide & Disinfectant Manufacturers.

NOTE: Because Deo-Base is free from Kerosene odor, the use of perfume is entirely optional. However, if a definite perfume is desired only an exceedingly small quantity of perfuming material is required (1 to 2 ozs. per 100 gals.) to bring out the full and pure fragrance of the odor at a cost entirely negligible. (1/4c to 1/2c per gallon for a $4.00 per pound odor.)

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Refiners of White Oils and Petrolatums

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COLOR AND PERFUME

And in one operation! That's why makers of paradichlorobenzene blocks, bath salts, and moth balls find Paratints effect a real saving.

Paratints come in six colors—from cerise to violet—and are matched with popular floral scents. Paratints color uniformily . . . cover the odor of paradichlorobenzene effectively.

Paratints are available in two price ranges:

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PERFUME **FLY SPRAY** EFFECTIVELY

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A light colored liquid for spraying cattle to rid them of annoying flies and insects. Contains the active principle of pyrethrum. Will not stain, blister or burn, and has no disagreeable odor. A popular product with farmers and dairymen. Supplied in bulk to the distributing trade only.

PES-TOX

An efficient liquid household insecticide of the pyrethrum type, pleasantly scented. Surpasses in effectiveness the standard of the National Association of Insecticide and Disinfectant Manufacturers. Each lot carefully controlled by the Peet - Grady method. Supplied in bulk for distributors to resell under their own trade-names. Also suppliers of pyrethrum concentrate.

PINE OIL DISINFECTANTS

made from pure steam-distilled pine oil, and agreeable in odor and dilute with water to form rich, milk-white emulsions.

HIPINE, made according to the formula of the Hygienic Laboratory has a phenol coefficient of four to five.

ORPINE, prepared from slightly different ingredients, has a coefficient of three to four.

CLEARPINE is a specially refined product, very light in color, and has a phenol coefficient of four to five.

All are high-grade products, reasonably priced. Every lot chemically controlled and standardized. Supplied only in bulk to the distributing trade for resale under their own names and labels.

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All 29 Blake sizes may be had with either screw-cap or cork finish.

Above: A group of Onlzed *Containers now available in Amber Glass. Those that are not stock items may be had on special order.*

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rich in color — strong in sales appeal

The popularity of *Onlzed* Blakes in Amber Glass has been so marked that we have extended the use of this beautiful color to a number of additional styles. The illustration above gives you an idea of the attractive shapes which can now be obtained in Amber Glass. Give your product a striking individuality—the distinctive beauty of these containers will set it out in strong contrast to its neighbors. Here is an opportunity for you to use this enlarged line of *Onlzed* Amber Containers and cash in on the widespread approval now given to *Onlzed* Amber Glass. Owens-Illinois Glass Company, Toledo, Ohio.

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We are offering a very complete and diversified line of Essential Oils and Aromatic Chemicals of particular interest to Soap Makers and Manufacturers of Paradichlorbenzene and Naphthalene products. When in the market may we have the opportunity to submit prices and samples for comparison?

As representative of the well known house of Bertrand Freres, S/A of Grasse, France, we are in a position to offer oils such as Lavender, Geranium, Thyme, Rosemary, etc., of the highest quality at competitive prices.

SUPER SOLUBLE PERFUME BASES

Our laboratory has recently developed a line of concentrates which produce perfectly clear products when used in the proportion of one to two ounces per gallon of water. This new type of base is offered in a wide range of odors, each at $1.50 per pound. A sample sufficient to prepare a trial gallon will be forwarded upon request.

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"It's the Odor that Sells the Product"

Oil Citronella is higher~

Standardize cost and save with

ANDRO, MM&R

An efficient and economical substitute!

With oil citronella much higher in price and with little or no stability to the market, the wisdom of standardizing on an efficient substitute is quite apparent. In Andro, MM&R we offer an excellent product to accomplish this purpose. It is low in cost and, of even greater importance, the price does not fluctuate. This new and excellent product presents the characters midway between Oil Citronella Ceylon and the Java variety. It is equal in pungency to the best citronella oil, light in color, uniform in quality and strength, almost water white and without the tendency to darken in your finished soaps, sprays or other products.

It will pay you to investigate this new MM&R Specialty!

The 1933 Spray Perfume
KEROSPRAY
BOUQUET No. 804
Have you tried it?

MAGNUS, MABEE & REYNARD, INC.

32 CLIFF STREET, NEW YORK, N. Y.

ESSENTIAL OILS ***AROMATIC CHEMICALS*** ***PERFUME MATERIALS***

METAL POLISH

We do not manufacture metal polishes, but we do know that properly compounded metal polishes containing Yarmor Steam-distilled Pine Oil have these properties:

1. They are non-inflammable.
2. They contain no injurious ingredients.
3. They spread freely.
4. They wipe easily and leave an excellent finish.
5. They remove tarnish and grease films.
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7. They are economical to use.

Steam-distilled Pine Oil
Steam-distilled Wood Turpentine
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for the wholesale trade

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INSECTICIDE AND DISINFECTANT SECTION

A Department of SOAP

SOAP is official publication of *The National Assn. of Insecticide and Disinfectant Manufacturers.*
HARRY W. COLE, Secretary, Holbrook, Mass.

THE INSECTICIDE AND DISINFECTANT CODE

A TENTATIVE code for the insecticide and disinfectant industries has been drawn for submission to Washington. The work of the committee of the National Association of Insecticide & Disinfectant Manufacturers, who formulated the code, was unquestionably one of the most difficult jobs which any committee in the industries has ever undertaken. The provisions covering trade practices which they have written into the code are drastic and sweeping. That some of them will meet with strong opposition from the trade, especially from a few manufacturers outside of the Association, goes without saying. The question of premiums, the elimination of which is called for in the code, has raised a storm of controversy for fifteen years in the disinfectant industry. Trade discounts, also a sore spot for some years, will be standardized if the present code is adopted. Deferred payments, bill backs, guaranteed sales, coupons, and anticipation discounts are listed for elimination.

The complete elimination of free goods should meet with universal approval, as well as free goods supposedly intended for window displays. Never more than a subterfuge for a price cut, free goods have been a thorn in the side of insecticide manufacturers and some disinfectant manufacturers for years. They have constituted a nasty complication in merchandising and we do not believe that anybody will mourn their passing. Consignment stocks represent another evil which the industries can well be rid of. They have come from the desperate efforts of weak houses to push their goods into distributing channels at any cost. They are the most unfair of unfair competition. Advertising allowances to jobbers and chains are another abuse which everybody should be glad to see eliminated. In actual operation, these allowances were just another means of chiseling down the manufacturer's profit by the buyers. Everybody knows that the allowance is often never spent for actual advertising.

The requirement in the code that the phenol coefficient of coal-tar disinfectants be printed on every package is a good one. It should help to protect the legitimate seller of disinfectants who delivers the full strength from the competition of those who promise a certain coefficient by word-of-mouth, but seldom, if ever, deliver it. Compulsory coefficient statement on the package makes this type of cheating extremely difficult.

In the matter of wages and a forty-hour week, there will probably be little disagreement. It will be in the trade practices, where controversies are bound to rage. In the meantime, enforcement of the code awaits acceptance by the industry and by Washington.

National Assn. of Insecticide *and* Disinfectant Manufacturers

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MEMBERSHIP

Active—Open to manufacturers and wholesale distributors of disinfectants, germicides, deodorants, insecticides, liquid soaps, polishes, and allied products. Dues—$75.00 per year.

Associate—Open to firms supplying raw materials, containers, equipment, etc., to the membership. Dues—$50.00 per year.

For further details, communicate with

NATIONAL ASSOCIATION OF INSECTICIDE & DISINFECTANT MANUFACTURERS

Harry W. Cole, Secretary

HOLBROOK MASS.

Notes of the Trade

E. L. Brendlinger has recently been elected president and treasurer of Dill Co., Norristown, Pa., Aaron S. Swartz, Jr., has been named vice-president and M. F. Benner, secretary and assistant-treasurer. An office has been opened in New York at 130 West 42nd Street under the direction of Herbert I. Slifer, and one in Chicago at 2219 Tribune Tower under G. R. Van Kampen.

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Byrd Walker, former president of White Tar Co., Kearny, N. J., died at his Newark home, July 25, after a long illness. Mr. Walker was originally associated with A. Klipstein & Co., New York, and in 1909 acquired White Tar Co. which he headed until his retirement a few years ago. He was sixty-five years old, and is survived by a widow and one daughter.

—o—

Insecticide Biological Labs., 4111 Olive St., St. Louis, has been formed by Arthur Whittaker, formerly vice-president of Insecticides & Antiseptics, Inc., St. Louis. In his new organization, Mr. Whittaker will manufacture a variety of household and agricultural insecticides, including powdered products, liquid sprays and rodent exterminators.

—o—

Standard Oil Company of California, San Francisco, has announced a stop-price policy applying to all of its specialty products, such as insecticides, polishes, and so forth. The policy applies throughout California, under that state's Fair Trade Act.

—o—

Testimony was taken July 24 in the case of the Federal Trade Commission against Miracul Wax Co., St. Louis, the hearing being held in the U. S. Customhouse building at St. Louis. William C. Reeves was trial examiner.

—o—

John Optiz, Inc., insecticides, announces the removal of offices to 50-14 39th Street, L. I. City, N. Y. The new telephone number is Stilwell 4-2728.

—o—

Walter M. Davis, sales manager of McCormick & Co., has been elected a member of the board of directors of the company, succeeding C. E. Leber, resigned.

—o—

Clifton Chemical Co., New York, is distributing a folder describing its new electric vaporizer "Insector," and "Mist-O-Cide."

—o—

Calcyanide Co., New York, has issued a booklet entitled "Insect Control in Flour Mills," describing use of the new fumigating device recently introduced by the company—the "Calcyanator."

Draw Up Code for Insecticide and Disinfectant Industries

Association Committee Meets in Philadelphia—Eliminate Free Goods, Consignments, Premiums

AT a meeting of the Code Committee of the National Association of Insecticide & Disinfectant Manufacturers, held August 8 at the Penn A. C., Philadelphia, a tentative draft of provisions to be included in a code for the insecticide and disinfectant industries was drawn for submission to the membership of the Association and to the industries at large. Dr. Robert C. White of the Robert C. White Co., chairman of the committee, presided. Others on the committee included Russell H. Young of the Davies-Young Soap Co., Dayton, O.; William J. Zick of Stanco, Inc., New York; J. L. Clark of Dr. Hess & Clark, Inc., Ashland, O.; W. L. Savell of the Mathieson Alkali Works, New York. President Peter Dougan of the Association and Secretary Harry W. Cole also sat on the committee.

The provisions of the code were drawn roughly by the committee to be later worked into the formal code for presentation to the industries. The original draft included a forty hour week for both men and women in the industry with a basic wage for men tapering from $15 in cities of over 500,000 down to not less than $12 in towns under 2,500. No persons wlil be employed under 16 years of age. The definite elimination of all free goods is provided for, and also the elimination of consignments, free distributions, bill backs or charge backs, deferred payments, guaranteed sales, free goods for window displays, and premiums of all kinds. Standard discounts of 15 per cent and 2 per cent from list prices were set. Anticipation discounts have been eliminated. Advertising allowances are barred but cooperative advertising will be permitted to some extent but predicated entirely on the lineage received and in no case will the allowance exceed the national rate for the space used. Coupons are barred. Sales will not be made at less than cost or production plus freight. Chains maintaining warehouses and given warehouse services are to be regarded as wholesalers and extended at the same rate of discount. Sales to retailers will be made at list prices only.

Standards for insecticides and disinfectants were specified. On pyrethrum liquid insecticides, a standard product is considered one having not less than a 60 per cent kill by the Peet-Grady Method. Standards for disinfectants are to be determined in accordance with the method and specifications of the Food and Drug Administration. The phenol coefficient must appear on every package of coal-tar disinfectant, and on other types of disinfectants in accord with the rulings of the Food and Drug Administration. Any and all products containing poisons will have to be so noted on the label, the word poison being defined as it appears in the Federal Caustic Poison Act.

In order to enforce the code within the insecticide and disinfectant industries, a Code Enforcement Committee will be appointed by the president of the Association, subject to the approval of the Board of Governors. It is understood that the National Association of Insecticide & Disinfectant Manufacturers may file its code when accepted by the membership as a sub-code to the general chemical industries code, probably through the Chemical Alliance, a war-time body which has been revived by all leading chemical interests to act as a coordinating and contact agency in code matters with Washington. President Peter Dougan of the N. A. I. & D. M. is a member of the board of the Chemical Alliance representing their insecticide and disinfectant interests under the National Recovery Act.

—o—

Fries Bros., New York, have recently gone into production on a new antiseptic and germicide, "Cresophan," which is being distributed by R. W. Greef & Co., New York. It is an alkayl derivative of mata cresol, and is particularly active against staphylococcus aureus. It is produced in two grades, pure and technical. Odor and taste resemble those of thymol.

—o—

John F. Littooy, insecticide expert and former employee of Hercules Glue Company, has filed suit in Superior Court at San Francisco against that company. He demands the return of his patents, compensation for profits from his insecticide formulas, and an injunction to withhold the company from further profiting as a result of his inventions. Littooy asserts he has been deprived of his rights in a formula "worth $200,000."

—o—

A decision in favor of B. J. Moore Sons' Co., Utica, N. Y., in its case against Smith Mfg. Co., Utica, involving use by the latter of the word, "Bombs," in advertising its rat poison, has recently been handed down by Justice Edmund H. Lewis. The plaintiff owns the trade mark, "Rat Bombs. 'Blast the Rats'," registered November, 1932. E. Earl Jones has been named as referee to take proof as to the amount of profits that have accrued to the defendant and damages sustained by the plaintiff.

The Action of Pyrethrum on Insects

By Alfred Weed*

John Powell & Company

IN considering the action of any insecticide on insects an understanding of their morphology is essential. As their physiology is a little known subject, we are forced to do largely without knowledge in this field. In order to better understand insect structure and its relation to the workings of an insecticide, we have selected a few pictures which will be helpful in considering the present discussion and any subsequent papers along the same line.

The natural openings through the body wall consist of the mouth and anus, the spiracles and genital ducts. There are present on various portions of the insect's body a variety of setae, sensory structures and glands which are closely connected with the hypodermis, a cellular layer which lies below the cuticula. There are also flexible portions of the cuticula at the joints of apendages and between the heavier portions constituting each body segment. Any or all of these openings and structures may be associated with the resulting response shown when insects are subject to treatment with various insecticides.

Internally there is present a tubular digestive system, a branch tubular respiratory system, a ventural nervous system and a dorsal organ which provides for circulation of the blood, the internal organs being bathed in this fluid.

Literature

A detailed study of the mode of action of Powdered Pyrethrum has not been reported. Many investigators have recorded their observations on the response or reaction of a variety of insects to the drug with suggestions as to how it might act.

We are indebted to Juillet (3) for a discussion of the subject, he pointing out the importance of entrance by way of mouth. He is in agreement with Passerini (6) that permeable portions of the integument and the presence in it of pores and glandular structures may be associated with the action of Pyrethrum. An adequate explanation of the intoxication phenomenon is lacking.

Shafer (7), although attributing the effectiveness of Pyrethrum Powder to its volatile constituents, reports detecting particles of the powder in the vestibules of the tracheae within the spiracles after insects are dusted. Of greater interest are his conclusions that sodium fluoride and borax may kill roaches solely by contact (8). This is accomplished through their partial solubility in exudations on parts of the insect's body and absorption through more permeable areas.

In view of the recent work at the Boyce Thompson Institute, it would seem that a similar explanation might be offered as one of the means at least by which the Pyrethrins gain entrance to the body cavity.

We are indebted to Drs. Wilcoxon and Hartzell (10) for a concise picture of the mode of action of the Pyrethrins,—particularly applying to their manner of entrance through certain areas of the integument. They have demonstrated the need of a wetter if aqueous solutions are to penetrate the tracheae (9). They have shown that Pyrethrum materials induce characteristic intoxication and kill without proximity to spiracles and other body openings (1).

By means of dyes dissolved in Pyrethrum concentrate they have pictured the ability of the Pyrethrums to enter by way of articular membranes and the conjunctiva (10). With a staining technique using toluidine blue they have shown histological changes occurring in ventral ganglia and the nerve chord among insects destroyed by Pyrethrum. This effect on nerve tissue was not manifest in insects which were decapitated, killed by lead arsenate or nicotine sulphate. This vacuolated manifestation in nerve tissue confirmed Krüger's (4) findings, who in addition noted changes in the hypodermis and muscles of the larvae of a midge subjected to suspensions of Pyrethrum in water.

A limited solubility of the Pyrethrins in water as found by Wilcoxon and Hartzell (10) offers a means of explanation for the destruction of nerve tissue reached by the Pyrethrins through their circulation in the body fluid following penetration.

As previously noted where aqueous spray solutions are concerned they must be used with a wetter if penetration into the tracheae is to be obtained. Shafer (7) working on a variety of insects invariably found stained kerosene in the tracheae system of sprayed insects. When applied in sufficient quantities it was able to pass the closing apparatus of species so equipped.

Penetration into the respiratory system following entrance through the spiracles of Pyrethrum in oil and oil sprays has been demonstrated by F. C. Nelson (5) in work on honey bees under the Crop Protection Institute. It was there shown that live honey bees suspended in bell jars in which the dyed spray had been distributed drew the fine spray particles into the tracheal tubes. In a comparatively short time the colored spray penetrated to the nerve tissue dying it a light pink. Later observations showed muscle tissue stained.

It is evident that with a toxic spray, using oil as a carrier, an appreciable amount of the material gains entrance through the spiracles and penetrates into the respiratory system.

Symptoms

The first apparent evidence of the effect of Pyrethrum Insecticides on insects is a period of increased activity or excitement. This response is due either to the objectionable or irritating properties of the drug or is simply a muscular response to an excitant. This initial period of greater activity is followed shortly by a variety of abnormal responses. The insects treated may stagger or sway when walking, assume a defensive attitude, vibrate the wings with or without taking to flight, frequently vomiting or passing faeces.

Normally the paralysis progresses forward indicating the probability of a more rapid intake of the toxins through the abdomen, and their movement anteriorly to the nerve centers in the thoracic cavity. Control of the hind pair of legs is lost first. These are controlled by a ganglion or the posterior portion of coalesced ganglia in the rear part of the thorax. As the other thoracic ganglia are reached the other pairs of legs cease to function as do subsequently the wings. Flies, for example, seem to be unable to cling to surfaces; they drop, taking to flight and may buzz about for many seconds without being able to come to rest in a normal position. They drop to the floor, but again may resort to flight before succumbing to the action of the drug. The legs are drawn up close to the body in an irregular arrangement (2). Larvae and adult insects incapable of sustained flight strive vainly to remain erect and continue normal movements. Direct applications of concentrated materials to the head are rapidly followed by inability to handle the forelegs and complete paralysis is more rapid following such treatment.

This period during which loss of control of the motor apendages and inability to remain upright occurs is followed by almost immobile paralysis. A flexing of the legs, vibrations of the wings and movement of the mouth parts, frequently with continued vomiting and the passing of faeces, is observed among insects in this stage of intoxication. The ultimate effect is death or recovery, dependent upon the dosage.

Ethyl thiocyanate and methyl isothiocyanate produce symptoms similar to those caused by Pyrethrum (1).

Manner of Action

From the literature available it would appear that entrance of the powder to the interior of the insect may occur through natural openings and or penetration of the active principles through articular membranes when dissolved in body secretions. Liquid extracts gain entrance through similar areas, but in order to enter the respiratory system they must be in a solution which possesses wetting or penetrating properties.

Internally through partial solubility in the body fluid the nerve centers are reached inducing the characteristic symptoms of Pyrethrum intoxication.

Conclusion

In published investigations of the subject evidence has been presented to demonstrate that the active principles of Pyrethrum product histological changes in nerve tissue, doubtless of primary consequence in bringing about paralysis and death. Changes produced in the hypodermis or muscles are of sec-

* This and following papers read before 19th Mid-Year Meeting, Nat'l. Assn. of Insecticide & Disinfectant Mfrs., Chicago, June, 1933.

ondary importance. Pyrethrum Powder and Pryethrum Extracts are typically contact insecticides. Their efficiency depends upon bringing into intimate contact with the insect's body a sufficient quantity of material to be lethal.

Literature Cited

1. Hartzell, Albert, and Wilcoxon, Frank. Some factors affecting the efficiency of contact insecticides. II. Chemical and toxicological studies of Pyrethrum. Contrib. Boyce Thompson Inst. 4:107-117, 1932.
2. Hedenburg, O. F. Correspondence of May 23, 1933. Mellon Institute of Industrial Research.
3. Juillet, A., d'Everlange, M., et Ancelin, M. Le pyrethre insecticide de Dalmatie. Origine, culture, principes actifs, applications a l'agriculture. Etude botanique, chemique et agricule. 236 pp. Roumegous et Dehan Montpellier, 1924.
4. Krüger, Friedrich. Untersuchungen uber die Giftwirkung von dalmatischem Insektenpulver auf die Larven von *Corethra* plumicornis. Zeitschr. Angew. Ent. XVIII: 344-353, 1931.
5. Nelson, F. C. The penetration of a contact oil spray into the breathing system of an insect. Jour. Econ. Ent. XX, 632-635, 1927.
6. Passerini, N. Sul potere insetticida del Pyrethrum cinerariaefolium Trev. coltivato a Firenze in confronto con quello di alcune altre Asteracee. Nuovo giorn. bot. italiano IX, 26, p. 30, 1919.
7. Schafer, George D. How contact insecticides kill. I. II., Michigan Exp. Sta. Tech. Bull. 11, 1911.
8. Schafer, George D. How contact insecticides kill. III., Michigan Exp. Sta. Tech. Bull. 21, 1915.
9. Wilcoxon, Frank, and Hartzell, Albert. Some features affecting the efficiency of contact insecticides. I. Surface forces as related to wetting and tracheal penetration. Contrib. Boyce Thompson Inst. 3:1-12, 1931.
10. Wilcoxon, Frank, and Hartzell, Albert. Some factors affecting the efficiency of contact insecticides. III. Further chemical and toxicological studies of Pyrethrum. Contrib. Boyce Thompson Inst. 5:115-127, 1933.

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Rotenone in Fly Sprays

Raising the Quality of Pyrethrum Fly Sprays by the Addition of a Constant Amount of Rotenone

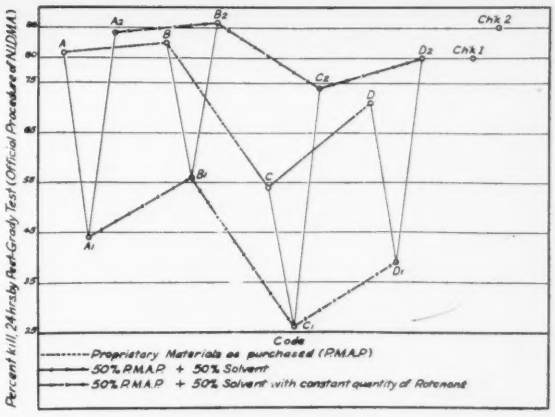
By A. Edison Badertscher

McCormick & Company

ROTENONE, one of the toxic constituents of Derris root and several other tropical plants, has commanded a very prominent position in the investigatory field of insecticides during the last five years. This investigation was chiefly confined to the research activities of the Insecticide Division, Bureau of Chemistry and Soils, U.S.D.A., until the last few years when a few commercial concerns began in an organized way to put capital and constructive effort behind the merits of rotone and other Derris derivatives. During this period of extensive research, considerable publicity was given over to rotenone; not only to the scientific world but to the semi-technical and non-technical audience as well. With this vast store of information on the chemical and physical properties of rotenone, which is now available, a diligent manufacturer has at his disposal a very tangible problem.

Most of the commercial application in the past has been exerted toward the development of appropriate formulae, using rotenone or other Derris derivatives, as horticulture insecticides. This is perhaps due to the fact that Rotenone is comparatively insoluble in petroleum oils. Therefore the use of this toxic plant product as an ingredient in kerosene house fly sprays offers practically an untouched but a very unique field of commercial development.

Campbell, in a "Review of Information on the Insecticidal Value of Rotenone," May, 1932, indicated that rotenone has some value as a house fly spray. The most recent information on rotenone and Derris was presented at a recent meeting of the



American Chemical Society and will appear in the June issue of the Journal of Industrial and Engineering Chemistry. One of these articles "Rotenone" by R. C. Roark, is a complete resume of all available data on Derris and rotenone, dealing with sources of supply, specific properties and relative toxicity. The other article by R. W. Birdsall, "The Commercial Aspect of Rotenone and its Future Possibilities," discusses the production of rotenone and other Derris derivatives on a large scale. The subject of the value of a properly manufactured Pyrethrum-Rotenone concentrate is briefly discussed. Gnadinger and Corl reported on the "Relative Toxicity of Pyrethrins and Rotenone as Fly Spray Ingredients" in the Journal of Economic Entomology, Bol. 25, No. 6, December, 1932. However, as was previously stated the proper use of rotenone as a toxic ingredient in petroleum oil base insecticides offers a practically untouched but very unique field of endeavor. By utilizing all published data with the experience gained by personally conducting Peet-Grady tests on between ninety and a hundred varying concentrations of Pyrethrins and Rotenone and manufacturing about 7,500 gallons of finished spray of this nature, I have therefore a somewhat vague picture of the merits and possibilities offered by the use of rotenone in household insecticides.

With the above facts in mind, the idea was conceived that it would be very interesting to determine what results would be obtained by adding a definite constant amount of rotenone to certain proprietary brands of household insecticides. Four brands were selected from the shelves of a large drug chain in New York City, May 1, 1933.

The four brands selected will be designated during the rest of the discussion by the letters A, B, C, D. From these four proprietary products the following series of twelve samples were prepared and tested with two check materials according to the official procedure adopted by the N.A.I.D.M., as it appears in *Soap*, April, 1932.

Samples, A, B, C, D, represent the four brands selected to determine the original dilling factor. A1, B1, C1, D1, represent a combination of 50 per cent of the respective brands and 50 per cent base solvent which will serve as controls in the toxicity of the base solvent. A2, B2, C2, D2, represent a combination of 50 per cent of the respective brands and 50 per cent base-solvent containing 0.1 per cent Rotenone, this will represent a rotenone concentration of 0.05 per cent in the combination. These last four samples should be indicative of the toxic value of 0.05 per cent rotenone in a house fly spray. Check No. 1 consists of a 4½ per cent solution of "Lethane," 384 in Deo Base. Check No. 2 is a "Pyrethrum-Rotenone" concentrate, which is available from at least two sources, diluted one part concentrate and four parts Deo Base. One test was made per day on each of the fourteen samples until ten tests were completed. This method of procedure made it possible to complete the same number of tests per sample on each culture of flies. The summaries are therefore comparable since a slight possible variation in conditions, experimental error, and a possible variation in the resistance of the different cultures of flies has been taken care of in a relative manner. The following table shows the total number of flies used, the average per cent knocked down in ten minutes and the average per cent of the dead flies in 24 hours.

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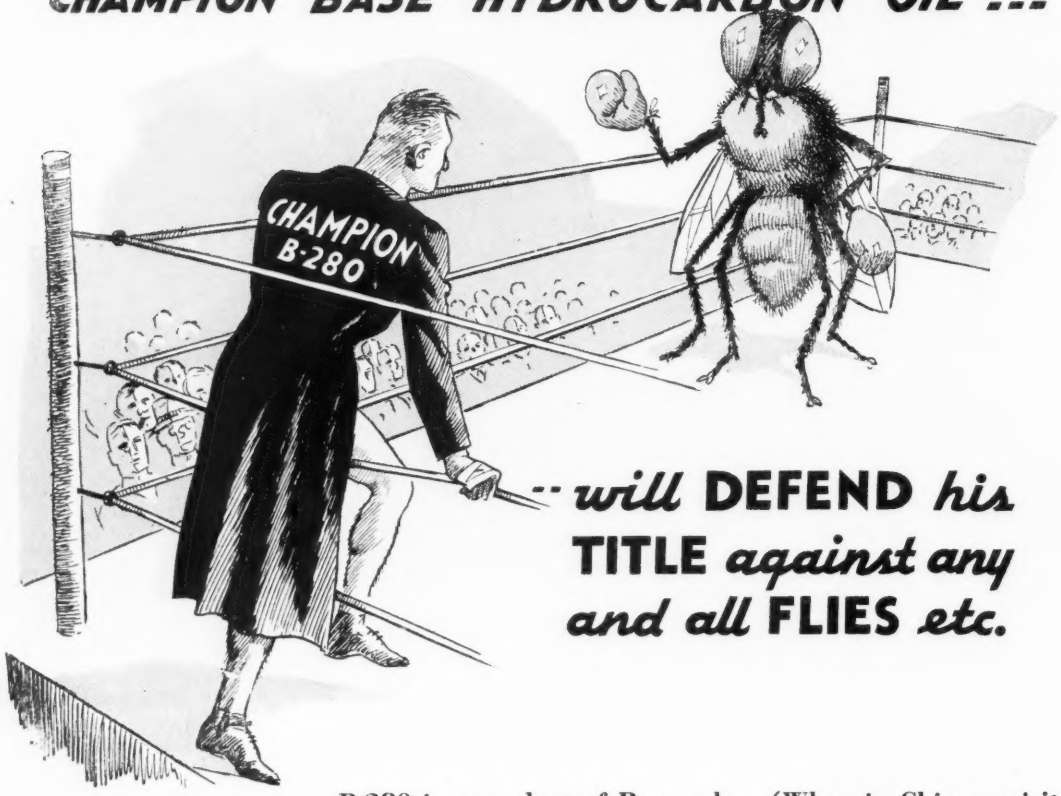

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Rotenone in Fly Sprays

(*From Page 85*)

TABLE 1

Sample No.	Total No. Flies Used	Av. % Knocked Down	Av. % Killed
A	1,110	98	81
A-1	979	95	44
A-2	1,096	99	85
B	1,007	98	83
B-1	959	96	56
B-2	992	99	87
C	1,001	96	54
C-1	894	89	26
C-2	1,068	96	74
D	1,034	97	71
D-1	1,020	95	39
D-2	899	88	80
Check 1.....	1,060	100	80
Check 2.....	983	99	86

Brands A and B show a much higher kill than was generally obtained from these same brands one year ago. In order to draw a definite conclusion whether these two products have been materially increased in quality, it would be necessary to pick up samples from other sources to be tested.

TABLE 2

The difference in killing activity between the proprietary materials as purchased and a combination of 50 per cent (P.M.A.P.), 50 per cent base-solvent and 0.05 per cent rotenone.

A2—A	85—81 =	4
B2—B	87—83 =	4
C2—C	74—54 =	20
D2—D	90—71 =	9

Since the respective proprietary brands exhibited different killing factors, the different killing property of 0.05 per cent rotenone varies considerable according to the varying concentrations of pyrethrins. This condition can be readily understood by those who are familiar with a typical pyrethrum kill curve. Such a curve appears in the Journal of Economic Entomology, Vol. 24, No. 1, February, 1931—page 274.

In a study of the curve chart it is evident that the addition of the stated amount of rotenone exhibits merits as a housefly spray. The increase in per cent killed is much less in the samples which possessed a high toxic property and much more pronounced where the original sample possessed low toxic properties. From this critical study of the above data it can bee seen that in order to gain the maximum efficiency from a pyrethrum-rotenone combination, it is important to use a definite amount of each of these toxic ingredients. However, from this data it is impossible to conclude that that definite amount is, since the pyrethrum content of the proprietary brands is unknown. It must also be definitely understood that merely a statement that rotenone is present in a product is not enough, but that the necessary quantity must be properly held in solution.

In conclusion it may be stated that 0.05 per cent rotenone in a house fly spray has merits, but that the initelligent use of rotenone in this field requires a knowledge of the amount of active principles of pyrethrum with which it is to be incorporated.

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Standard Tar Products Co., formerly at 7 Juneau Ave., Milwaukee, has moved to 1621 North Commerce Street.

—o—

A. & B. Sanitation Co., 721 S. Kedzie Ave., Chicago, is reported to have moved to 1105 S. Crawford Ave.

—o—

Baltimore Paint & Color Works, Baltimore, maker of "Kartex" polish, has appointed Chanslor & Lyon Stores, Inc., as distributors in California.

Technical Factors in Disinfectant Sales

By Walter L. Savell

Mathieson Alkali Works

THOSE of us engaged in the sale of disinfectants carry a responsibility to the public probably greater than that of any other commercial group. In our desire for profit, some of us apparently overlook this important fact at times. Just what is the peculiar responsibility that applies to this branch of industry that does not apply equally to all others? And how can we properly discharge the obligation we owe the public?

In the first place, we must remember that the disinfectant business has been created for us by the medical profession. Unless we maintain ethical standards closely akin to those maintained by that profession, its right to existence as a commercial activity may be seriously questioned. Secondly, the public is at a peculiar disadvantage in purchasing disinfectants. When may neighbor Mrs. Hill, purchases meat, paint, a vacuum cleaner or practically any other item of ordinary use she knows, at least after a trial, whether it fulfills the claims of the vendor or not. Also she is able to use standards established by her own experience in judging the item before actually purchasing it.

In the case of disinfectant purchases, these factors are entirely absent. When my neighbor buys a disinfectant, she does so for the same reason that may prompt her to call a doctor. The fact of purchase or contemplated purchase is definite evidence that a matter of health is involved. At the same time, it is quite impossible for the purchaser to determine if the material purchased is satisfactory for the intended use or not. Even after it has been used any number of times the actual value of the product may be entirely unknown. No action is apparent to the user and no standard of personal experience may be called up to serve as a yardstick of disinfecting qualities for the layman.

Therefore, we are bound to realize that every purchase of disinfectants is dependent entirely upon faith: the belief that certain very intangible benefits will be obtained. If these benefits are not realized the user, although not realizing that his confidence has been betrayed may suffer the natural losses attendant upon the persistence or spread of harmful or dangerous organisms. In the extreme case, illness which may be epidemic or death may be the ultimate penalty.

If we are to justify our inheritance and recognition as a valued ally to the medical profession, it is necessary for us to recognize these conditions and to shoulder the responsibility which they imply. This means then that it is our business to know our products, their disinfecting efficiency, logical uses, best methods of application for various uses and their limitations. It means further that we must be prepared to recognize and offer for sale newly developed disinfectants having superior properties or better suited to special applications than those previously marketed. As nature abhors a vacuum, so business abhors change. Nevertheless, change is not only essential to progress but is inevitable. And no industry is in a more active condition of flux than the disinfectant industry.

We realize, that an ideal disinfectant would be actually a *sterilizer*. It would be also non-toxic, harmless to the skin or living tissue, non-corrosive to metals, effective in extreme dilutions at all conditions of acidity or alkalinity, odorless, stainless and inexpensive to prepare. A few other qualities might be added to this ideal disinfectant, such as being entirely effective in the presence of organic materials. As a matter of practical fact, however, we know that no such ideal disinfectant is available. There are several inexpensive chemicals that will actually sterilize if used in sufficient concentration. Sulphuric acid, caustic soda and phenol are more or less representative types.

Of this group, phenol compounds are the only ones that meet the requirements for any practical use. Its caustic effect upon the skin, toxicity and other properties limit the concentration practical for many uses and therefore, the germicidal effectiveness. Characteristic odor makes it unsuitable for use for other purposes.

Essentially chemical in nature, the products of this industry represent only two of the four general methods of attacking the

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problem of disinfection. Briefly disinfection may be accomplished by—

(A) Physical means (such as heat, light, pressure, rapid vibration, electro-magnetic waves, such as ultraviolet light and others).

(B) Chemical means (including the action of those chemical substances which react chemically with the bacterial cell, its individual constituents, its food supply or by other action).

(C) Physico-chemical means which includes such processes as adsorption phenomena surface tension effects, salt effects, or osmotic pressure reactions, hydrogen ion concentrations and so on.

(D) Biochemical represented by action of body fluids on bacteria, enzyme actions, bacteriophage phenomena, lysins, other bacteria and other biochemical actions.

Of these the chemical and physico-chemical types form the basis of the disinfectant industry. Its existence and continued progress depends upon the ability to keep abreast of the ever-broadening and specialized demands with products designed to fulfill individual requirements.

This country undoubtedly represents an ideal market for disinfectants. As a whole, our people are more interested than any other people in the world in hygiene and sanitation. While progress has been made the greater part of the sales possibilities are hardly touched and the reason for this is that the manufacturers and sales organizations have been unwilling to assume their proper responsibilities.

Suppose for a moment you are selling a phenol or cresol disinfectant. You know it is satisfactory for disinfecting a cattle car because the Bureau of Animal Industry says so. Would you recommend it for use on the walls and floors of a packing house refrigerator containing dressed meat or eggs? Obviously not! The problem of transmitted odor and taste appears immediately.

Quite as obviously you would not recommend the use of mercuric chloride (corrosive sublimate) as a mouth wash or for disinfecting butchers' blocks or tools. The highly poisonous nature of this compound on one hand and its very corrosive action upon metals on the other, creates very positive limitations.

These two illustrations are used to show that properties of a material apart from its germ-killing efficiency are of utmost importance in effective and satisfactory application. Therefore, it is absolutely essential in successful marketing to know just where and how to apply any given disinfectant. If satisfactory business is to develop, the application of the material by the customer must be anticipated and the use of the product carefully directed.

De-limiting factors must be fully and conscientiously considered. Among others these will include such items as germicidal efficiency under the proposed conditions, odor and taste transmission, corrosiveness to metals, wood or skin tissue, effective concentration for the recommended application. In order to supply such information, it is naturally necessary to know the real nature of the disinfectant; how it accomplishes the disinfection, whether by oxidation, reduction, oligodynamic or other action upon the organisms and just what limitations it may have in regard to germicidal effectiveness upon the various types of pathogenic bacteria likely to be present in each case.

The market is wide open. Wherever human beings live and work or domestic animals are kept, disinfectants may be sold. It remains only to the industry to offer the proper products together with complete, honest, authentic and detailed information regarding uses to expand the disinfectant industry to the greatest prosperity it has ever known.

—o—

George E. Riches has been appointed manager of the chemical and wholesale department of American Agricultural Chemical Co., New York, and will supervise sales of heavy chemicals and insecticides. Mr. Riches is a son of George R. Riches, founder of Riches Piver Co., and first commercial manufacturer of calcium arsenate.

The Use of Liquid Insecticides for Preventing Moth Damage

By Wallace Thomas
Gulf Refining Co.

FOR a full understanding of the three kinds of clothes and tapestry moths, their life cycle, what they feed on and the damage they do, also the various present day methods for preventing moth damage; I refer you to U. S. Department of Agriculture Farmers' Bulletins No. 1655, "The Control of Moths in Upholstered Furniture," by Drs. E. A. Back and R. T. Cotton, and No. 1353, "Clothes Moths and Their Control," by Dr. E. A. Back.

Every year, in the United States lone, moth larvae damage over a hundred million dollars worth of clothes, upholstered furniture, furs and rugs. Moths are present in practically every home, and are usually unsuspected. If it were not for the care used by manufacturers of upholstered furniture, by storage houses, by merchants, and particularly by the woman in the home, moth damage would be inconceivable.

The best way to rid a home of moths is to have it fumigated with hydrocyanic gas. The house may be left exposed to the action of the gas for from four to twenty-four hours. It can be ventilated, for occupation, within one to two hours. Farmers Bulletin No. 699 describes this method of fumigation. After the home has been fumigated, moth infestation will likely reappear eventually if certain preventive methods are not used.

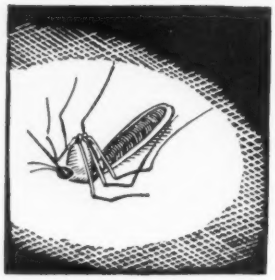
It is possible to mothproof upholstered furniture for months and years, (provided it is not dry cleaned later or subjected to intense use,) by wetting thoroughly with certain mothproofing compounds fabrics composed of wool, hair, feathers or fur. These compounds usually act by making repulsive the eating of the moth proofed materials by the moth larvae. Larvae stomach poisons are also used, although the American Medical Association and the U. S. Department of Agriculture are opposed to the use of arsenical mothproofing compounds. There is no known treatment for mothproofing wearing apparel that is frequently used. The mere cleaning of any furniture, rugs or clothing by the dry cleaning method will usually lessen and often nullify the efficacy of previous mothproofing treatment.

After reviewing about a thousand patent formulas, compiled by Dr. R. C. Roark, in two publications entitled "An Index of Patented Mothproofing Materials," dated May, 1931, and February, 1933, I am inclined to think that few of the good and safe-to-use mothproofing compounds have insecticidal value. If they do have insecticidal value, then the entire piece of upholstered furniture, rug or garment must be thoroughly saturated to kill all moth larvae; a procedure that is rather impractical and expensive in the home. There are very few of the really effective mothproofing agents that can be used without danger of shrinking the materials treated. Such shrinkage may cause more damage than moth larvae.

After the home has been fumigated; here are a few effective methods for preventing moth damage. Use an electric suction sweeper with a motor driven brush or agitator on rugs and carpets. The driven brush will separate the moth eggs from the nap and the suction will carry them into the bag. The dirt from the bag should be burned.

With a good whisk broom or a good bristle clothes brush, brush once or twice a month all wearing apparel composed of wool, hair, feathers or fur, that is hanging unprotected in cupboards or elsewhere in the home. Do the same thing with all heavy drapes and upholstered furniture. This brushing dislodges and crushes the moth eggs. Brush, beat and sun everything frequently. Moth larvae never injure clothes or fabrics in daily use, or articles thoroughly brushed, cleaned or beaten once or twice a month.

Buy about ten pounds of naphthalene or paradichlorbenzene. Be sure it is tightly sealed, to prevent deterioration. Also buy a quart of household insect spray of the liquid hydro-carbon pyrethrum type and a hand sprayer. Only an insect spray of strong pyrethrum content should be used. Cheap sprays are usually poor in killing power and of little use. Every two or three weeks spray this insect spray thoroughly on all upholstered furniture, also on all garments and materials made from wool, hair, feathers or fur, that are hanging loosely in cupboards or are lying loosely in drawers not tightly sealed. Be sure to wet



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  Hygienic Laboratory Method. Phenol coefficient of approximately 4. Contains 70% pure steam distilled pine oil. Also lower priced grades where desired.
- HOUSEHOLD FLY and INSECT SPRAY
  A high grade spray, ready for use. High killing power, pleasing odor. Also excellent for moths, bed bugs and roaches.
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the fabric with the insect spray by holding the nozzle of the sprayer close to the material sprayed. This will destroy surface infestation of clothes moth larvae. Also spray thoroughly with insect spray the interiors of all cupboards and other enclosures containing wool, hair, feather or fur materials. After such spraying, place a liberal quantity of naphthalene or paradichlorbenzene on flat plates on the top cupboard shelves, (one pound to each ten cubic feet,) and shut the doors. Sprinkle the same liberal quantity on top of goods in drawers. If cupboard doors and drawers do not fit tightly or are opened often, the killing efficacy of naphthalene and paradichlorbenzene will be lessened and undependable. The recommended use of one pound to ten cubic feet necessitates tightly closed cupboards, drawers, and containers. If there are any accumulations of lint in the cracks of floor boards or any part of the home, such as hot air furnace intake pipes, and spaces between the floor and baseboards, this lint should be removed or wet with insect spray.

These simple methods will help keep any home free from damage by clothes moths. Furniture stores and warehouses, woolen mills, dress and suit manufacturers, and clothing stores can prevent a vast amount of moth damage by varying the above methods slightly for their particular use.

I have made full use of information contained in the publications referred to in this paper. I am also indebted to Ira P. MacNair, Dr. A. C. Grady, and especially Dr. Alfred Weed for the many practical suggestions and information they have given me.

———o———

Registration at Chicago

The official list of those registered at the Chicago meeting of the National Association of Insecticide & Disinfectant Manufacturers, recently released by Harry W. Cole, secretary, contained the names of the following:

Peter Dougan, Merck & Co., Rahway, N. J.
Fred Hoyt, Frederick Disinfectant Co., Atlanta, Ga.
R. W. Birdsall, Derris, Inc., New York City.
A. Edison Badertscher, McCormick & Co., Inc., Baltimore.
Dr. L. L. Isenhour, Rohm & Haas Co., Inc., Phila.
Edgar A. Murray, Edgar A. Murray Co., Detroit.
C. C. Baird, Baird & McGuire, Inc., Holbrook, Mass.
Henry A. Nelson, Chemical Supply Co., Cleveland.
Wm. A. Hadfield, General Laboratories, Madison, Wis.
W. J. Zick, Stanco, Inc., New York City.
John Powell, John Powell & Co., New York City.
K. A. Dolge, C. B. Dolge Co., Westport, Ct.
J. A. Walsh, C. B. Dolge Co., Westport, Ct.
R. S. Rowan, Edgar A. Murray Co., Detroit.
C. P. McCormick, McCormick & Co., Inc., Baltimore.
W. J. Andree, Sinclair Refining Co., New York City.
F. W. Wolff, E. I. DuPont De Nemours & Co., Wilmington.
Wm. J. Wagner, The Tanglefoot Co., Grand Rapids, Mich.
Philip P. Gray, Pease Laboratories, Inc., New York City.
Dr. G. F. Reddish, Lambert Pharmacal Co., St. Louis.
A. A. Breuer, Breuer Electric Mfg. Co., Chicago.
John H. Halaska, Acme Chemical Co., Milwaukee.
Robert C. White, Robert C. White Co., Phila.
G. P. Morgan, Stanco, Inc., New York City.
H. W. Baldwin, Baldwin Laboratories, Saegertown, Pa.
Malcolm Yount, Baldwin Laboratories, Saegertown, Pa.
Ralph Bloom, The Cino Chemical Prod. Co., Cincinnati.
W. F. Plowfield, Manning, Bowman & Co., Meriden, Ct.
F. L. McCabe, Manning, Bowman & Co., Chicago.
Dr. A. Weed, John Powell & Co., Inc., New York City.
Wallace Thomas, Gulf Refining Co., Pittsburgh.
R. P. Neptun, Allaire, Woodward & Co., Peoria, Ill.
Ira P. MacNair, MacNair-Dorland Co., New York.
W. L. Savell, Mathieson Alkali Works, N. Y. C.
Harold R. King, W. Benkert & Co., N. Y. C.
R. H. Young, The Davies-Young Company, Dayton, O.
N. J. Gothard, Sinclair Refining Co., E. Chicago, Ind.
A. G. Grady, Sinclair Refining Co., East Chicago, Ind.
John H. Wright, Zonite Products Co., N. Y. C.
H. A. Barnby, Owens-Illinois Glass Co., Toledo.
Dr. R. C. Roark, Dept. Agriculture, Washington, D. C.
Dr. E. Klarmann, Lehn & Fink Co., Bloomfield, N. J.
A. L. Van Amerigen, Van Amerigen-Haebler, Inc., N. Y. C.
Hy E. Padway, Crown Chemical Co., Milwaukee.
James K. Stewart, Anderson Prichard Oil Corp., Chicago.
C. W. Carlson, American Can Co., Chicago.
S. S. Selig, The Selig Co., Atlanta, Ga.
G. C. O'Brien, Hercules Powder Co., Wilmington.
Friar Thompson, Jr., Hercules Powder Co., Wilmington.
Dr. Arthur J. Knilans, W. T. Rawleigh Co., Freeport, Ill.
W. K. Nelson, Shell Oil Co., San Francisco.
James Varley, Baird & McGuire, Inc., St. Louis.
G. A. McLaughlin, McLaughlin Gormley King Co., Minneapolis.
Roland E. Sturhahn, Monsanto Chemical Co., St. Louis.
Frank Robinson, Monsanto Chemical Co., Chicago.
A. T. Rooch, Interstate Sanitation Co., Cincinnati.
J. W. Lowrie, McCormick & Co., Chicago.
Charles Hermann, Clean Home Products, Inc., Chicago.
B. Brown, Clean Home Products, Inc., Chicago.
F. C. Nelson, Stanco, Inc., Elizabeth, N. J.
V. W. Mider, U. S. Chemical Co., Greenville, O.
S. H. Bell, Koppers Products Co., Pittsburgh, Pa.
C. F. Beatty, Socony-Vacuum Specialties, Inc., N. Y. C.
H. W. Hamilton, White Tar Co., Pittsburgh, Pa.
J. A. Cavanagh, Dow Chemical Co., Midland, Mich.
Grant A. Dorland, MacNair-Dorland Co., N. Y. C.
Thomas Morgan, MacNair-Dorland Co., Chicago.
J. H. Carpenter, Koppers Products Co., Pittsburgh, Pa.
M. W. Hanks, General Laboratories, Inc., Madison, Wis.
R. C. Quortrup, The Barrett Co., N. Y. C.
Wm. B. Eddy, Rochester Germicide Co., Rochester, N. Y.
E. E. Brand, L. Sonneborn Sons, Chicago.
C. H. Sterrett, Wm. Peterman, Inc., N. Y. C.
E. F. Sennewald, Sennewald Drug Co., St. Louis.
F. A. Martin, B. Heller & Co., Chicago.
D. W. Peterson, American Can Co., Chicago.
J. L. Brenn, Huntington Laboratories, Huntington, Ind.
Dr. Erich Meyer, L. Sonneborn Sons, Inc., N. Y. C.
G. A. Cammerer, Magnus, Mabee & Reynard, Chicago.
E. Hirschberg, Hirschberg Bros., Chicago.
A. Srebren, Murray, Nickell Mfg. Co., Chicago.
W. J. Dunnican, Reilly Tar & Chemical Corp., Chicago.
Walter R. Hills, Masury-Young Co., Boston, Mass.
Dr. M. A. Jacobson, Pepsodent Co., Chicago.
R. S. Solinsky, Continental Can Co., Chicago.
F. J. Pollnow, Vestal Chemical Co., St. Louis.
C. A. Seguin, C. A. Seguin, Chicago.
A. S. Hickerson, Hix Mfg. Co., Chicago.
Irma McFadden, The Pepsodent Co., Chicago.
E. E. McDow, Antiseptol Co., Chicago.
R. G. Cowin, Standard Oil Co. of Ohio, Cleveland.
C. M. Black, S. B. Jenick & Co., Chicago.
D. P. Lewis, H. D. Hudson Mfg. Co., Chicago.
M. B. Zimmer, Fritsche Brothers, Inc., N. Y. C.
V. A. Snell, Lowell Mfg. Co., Lowell, Mich.
J. M. Connors, Topics Publishing Co., Chicago.
M. C. Goodrich, Hudson Mfg. Co., Chicago.
L. J. LaCava, Continental Can Co., N. Y. C.
Dr. Thomas Lewis, S. B. Penick & Co., N. Y. C.
C. M. Guin, Arwell, Inc., Waukegan, Ill.
M. J. Flannagan, Federal Varnish Co., Chicago.
John H. Lawson, Federal Varnish Co., Chicago.
J. L. Tildsley, Jr., Reilly Tar & Chemical Corp., Chicago.
Harry J. Ahles, John Powell & Co., Chicago.
Dudley Lum, Givaudan-Delawanna, Chicago.
Martin B. Vance, Givaudan-Delawanna, Chicago.
S. G. Scott, Williams Sealing Corp., Chicago.
E. C. Kratsch, National Sanitary Sup. Assn., Milwaukee.
L. D. Benedict, Wizard, Inc., Chicago.
Wm. Higburg, Reilly Tar & Chemical Corp., Indianapolis.
W. O. Owens, Grasselli Chemical Co., Milwaukee.
W. H. Kircher, Farmers Wife Magazine, St. Paul.
A. E. Mailbauer, Bakelite Corp., N. Y. C.
M. E. Delaney, Bakelite Corp., N. Y. C.
Herbert Slifer, Dill Medicine Co., New York City.
G. R. Van Kampen, Dill Medicine Co., Chicago.
W. S. Burgess, Tanglefoot Co., Grand Rapids, Mich.
W. S. Burgess, Jr., Tanglefoot Co., Grand Rapids.
Edw. M. Baker, General Laboratories, Madison, Wis.
K. J. Fanshier, Oil, Paint & Drug Reporter, Chicago.

(*Turn to Page* 101)

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COUNT "7" POLISH for METALS

He spreads it on a badly tarnished surface,—leaves it for a few seconds (while he *counts seven*),—then wipes it off. Underneath the metal is dazzeling bright. No more tarnish, no mess, AND NO RUBBING! And the shine lasts longer because this new mild chemical gaint does not etch or scratch the surface.

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SOLUBLE and EMULSION TYPES
COEFFICIENTS 2 TO 50

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Liquid Soap
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Adopt Exterminating Code

Metropolitan Exterminators and Fumigators Act Under N. R. A.— Plan for National Code and Association

AFTER 150 representatives of exterminating and fumigating organizations in the Metropolitan Area had met for five sessions, the last of which was held Aug. 15 at the Pythian Temple, New York, a tentative code for the industry in that area was drawn for submission to Washington. The meetings which were held under the auspices of the Society of Exterminators and Fumigators of New York, were presided over by William O. Buettner, president of the Society. Inasmuch as the New York group is the only large organized group in the industry in the country, the plan has been propounded by Mr. Buettner that the code may also be adopted in other cities and communities and made to apply to the entire country, and possibly followed by the formation of a national association.

The code as tentatively acted upon, follows:

President William O. Buettner of the Society of Exterminators and Fumigators of New York has especially requested that an invitation be extended to exterminators and fumigators in cities and communities *outside* of the New York area to communicate with him for further details on the code and also with a view to organizing the industry nationally and adopting a uniform code for the entire country. He may be reached at 3019 Fort Hamilton Parkway, Brooklyn, N. Y.—The Editors.

Section 1

To effectuate the policy of Title 1 of the National Industrial Recovery Act during the period of emergency, the following provisions are established as a basic code of fair competition for the Exterminating and Fumigating Service Industry of the Metropolitan area of New York City.

Section 2, Definitions

(A) The term "Exterminating and Fumigating Service Industry" as used herein includes any person, firm, association or corporation engaged in the business of using insecticides, and fumigants, for the purpose of eliminating or controlling vermin, germs, rodents, insects and other pests.

(B) An "Exterminator" is any person, firm, association or corporation engaged in the business of using insecticides only.

(C) A "Fumigator" is any person, firm, association or corporation engaged in the business of using any fumigant or insecticide.

(D) The words "Exterminator" or "Fumigator" used herein shall mean employer, unless prefixed otherwise.

(E) The term "Employer" as used herein means all persons, firms, associations or corporations of the exterminating and fumigating service industry by whom employees are employed.

(F) The term "employee" as used herein means all persons employed in the conduct of exterminating or fumigating service.

(G) The term "Insecticide" as used herein shall mean and include any substance, not a fumigant, under whatever name used for the elimination and control of vermin, germs, rodents, insects and other pests.

(H) The term "Fumigant" as used herein shall mean and include any substance which by itself or in combination with any other substance emits or liberates a gas, fume, or vapor, which gases, fumes, or vapors when liberated and used for the elimination and control of vermin, germs, rodents, insects and other pests, is lethal, poisonous, noxious and dangerous to human life.

(I) The term "Metropolitan Area" as used herein shall mean that area as defined by the United States Department of Commerce.

(J) The term "effective date" as used herein, means the second Monday after this code shall have been approved by the President of the United States.

(K) The term "expiration date" as used herein means December 31, 1935, or at the earliest date prior thereto on which the President of the United States shall by proclamation or the Congress shall by joint resolution declare the emergency recognized by Section 1 of the National Recovery Act has ended.

Section 3, Employee Relations

Mandatory (A) On and after the effective date, and to and until the expiration date, the following provisions are conditions of this code, as required by Section 7 (a) of Title L of the National Recovery Act:

(1) That employees shall have the right to organize and bargain collectively through representatives of their own choosing, and shall be free from the interference, restraint or coercion of employers of labor or their agents, in the designation of such representatives, or in self-organization or in other concerted activities for the purpose of collective bargaining or other mutual aid or protection;

(2) That no employee and no one seeking employment shall be required as a condition of employment to join any company union or to refrain from joining, organizing or assisting a labor organization of his own choosing; and

(3) That employers shall comply with the maximum hours of labor, minimum rates of pay, and other conditions of employment, approved or prescribed by the President.

(4) The Selection, Retention and Advancement of employees will be on the basis of individual merit without regard to their affiliations or non affiliation with any labor or other organization.

(B) On and after the effective date and to and until the expiration date the minimum wages shall be as follows:

1—Employee exterminators	$21.00 per week
2—Apprentice exterminators	18.00 per week
3—Employee fumigators*	21.00 per week
4—Apprentice fumigators	18.00 per week

* Plus $2.00 per day for each day or part actually spent in doing fumigating work with cyanides.

The employees covered above shall not work more than 44 hours in any one week and not more than forty-four hours per week averaged for the period of any one year from the effective date to the expiration date. And further:

1. The hours of labor for employees and apprentice exterminators and fumigators shall be 44 inclusive of travel time.

2. Temporary employee or apprentice exterminators or fumigators shall receive a wage of $5.00 for each day's labor of eight hours or fraction thereof.

3. Overtime: For any employee exterminator, fumigator or apprentice who may be required to work on Sundays or legal

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For Fly Sprays
"SERRID" DOUBLE X

A combination Rotenone pyrethrum oil concentrate that will stay in solution,—a decided improvement in the field. Sold on a kill basis as high as 85%. With this base manufacturers may improve their product and lower their costs.

For Agricultural Sprays
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A finished concentrated liquid plant spray sold in bulk for repackaging. Highly effective against mealy bug and red spider. Tested and proven by prominent entomologists.

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LIQUID SOAP SUPER-CONCENTRATE
a base that is actually liquid!

SOAP VALUE: Highest possible soap content.
DISPERSION: Dilutes immediately in hot or cold water.
SOLUTION: Crystal clear.
SEDIMENT: Very slight.
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This product will save you money, time and labor.
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Liquid Soap Base
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Coal Tar Disinfectant
Pine Disinfectant
Soft Potash Soaps

holidays, such shall receive overtime wage to the amount of 1 1/3 times his regular wage calculated at an hourly rate of 44 hours per week, but no such employee as a result of such work shall be permitted to exceed the maximum hours per week of this code.

(C) On and after the effective date and to and until the expiration date the following classifications shall be provided for:

1. Office and supervisory staff receiving less than $35.00 per week shall work not more than 40 hours in any one week. The minimum wages of such employees shall be:

(a)	All Female	$15.00 per week
(b)	Office boys	15.00 per week
(c)	Male	18.00 per week

2. Salesman or Solicitor ..... 18.00 per week

No salesman or solicitor shall be permitted to engage in his work for more than forty hours per week.

(D) Other provisions:

1. No employer shall employ any person under the age of 21, clerical help excepted. Such clerical help shall not be employed under the age of 16.

2. No employer shall deduct from the wages of an exterminator, fumigator or apprentice carfares or any other expenses incidental to his employment.

3. Each employer will furnish approximately every four weeks duly certified reports in such form as may be hereafter provided showing actual hours of work and wages of employees, office and supervisory staff, salesmen and solicitors who come within scope of this code.

Trade Practices

(1) No employer shall be permitted to solicit business by advertising, publishing or in any other manner where a flat scale of prices is used. All prices submitted a prospective buyer must be individually determined.

(2) Rates for general exterminating work: (*This section held in abeyance for further consideration at Aug. 15 meeting.—Ed. Note.*)

Inasmuch as the practice of pricing or selling service below the actual cost of production by a minority of units of an industry is one of the major causes of low wages and general loss to an industry, the pricing of materials and services shall be based upon the following principle:

No employer shall solicit or permit solicitation of business of any competitor on the basis of prices or concession below those being paid at the time of solicitation. Should any employer seek business of a competitor and be uncertain as to the existing prices received by his competitor, he shall request such information from the authority hereinafter described who shall request the employer doing the work to furnish the existing prices and concessions received. The employer seeking such business must submit a price at least 10 per cent in excess of the price being received by the competitor. All prices are to be based on identical vermin conditions. Should employer furnish false and misleading information as to prices and concessions and vermin conditions, it shall be deemed a violation of this code.

To prevent unfair practice, awaiting time for actual signature of the President, immediately upon acceptance of this section by the group assembled, it shall be deemed in force.

3. The use of false, deceptive, untrue or misleading statements by way of advertising or otherwise concerning the nature or character of the service rendered by any employer shall be deemed unfair, and subject to penalty of the National Recovery Act.

4. No employer or any of his employ shall give any money or gratuity to any customer, prospective customer, or their agents or employees.

5. No employer shall conduct any business in a community until he has complied with all requirements governing work in such community.

6. No employer shall issue any bill or invoice which shall not contain the true and exact terms of sale or service involved.

Cyanide Fumigations

(a) The lethal standards of any cyanide fumigation, or of any fumigant that cyanide is a portion thereof, shall be only determined by its HCN content. Where letters are exchanged or contracts are submitted or given, between employers, their employ and customers or prospective customers, and the quantity of the fumigant used is mentioned, the symbol HCN and

DEODORIZING BLOCKS AND MATERIALS

Regular or Private Brand for Deodorizing and Moth Prevention Compressed Balls or Blocks

All Kinds of

NAPHTHALENE

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BREUER TORNADO

Vapo Steam Sprayer

Easy to Use—
Higher Quality—
More Capacity—

The new TORNADO Steam Sprayer provides a steam container jar made of heat resisting glass — not the ordinary, common glass jar.

The TORNADO sprays from a few ounces to one quart, giving greater and full capacity with all the safety features.

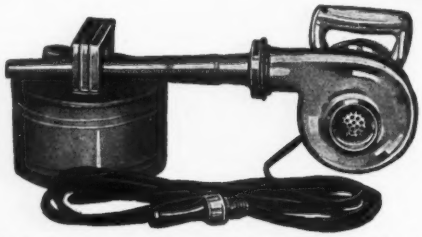
Adjustable nozzle for spraying at any angle without tilting or upsetting sprayer. Sprays concentrated or regular insecticides. Attractively finished throughout.

Offer your customers the most modern and efficient vapo steam sprayer, and be assured of increased sales and profit.

Also Most Complete Line of Electric Sprayers to Enable You to Meet Every Spraying Problem

Model 53 new Compressor Type unit with new adjustable volume control. Will break insecticide into *finest* mist and gas formation mechanically obtainable. Floats throughout spraying area for many minutes—a truly de luxe model! 1/8 H.P. G.E. Universal Motor. 1 quart metal container. 20′ of rubber covered cable.

Model 50 Fan Type unit. A fine insecticide atomizer. Sprays distance of 8′ to 10′. 1/8 H.P. G.E. Universal Motor, 1 pint glass jar. 20′ of rubber covered cable.



Model 6 Fan Type unit. Will break insecticide into a very fine mist. Sprays 18′ to 20′. 1/3 H.P. G.E. Universal Motor, Norma Ball Bearings, 1 gallon metal container. This model is for larger institutions, warehouses, industrials, etc., and is also highly recommended for moth-proofing solutions. Write today for complete description and circulars.

BREUER ELECTRIC MFG. CO.

862 Blackhawk Street **Chicago, Ill.**

We do not sell insecticides. Our business is manufacturing sprayers.

Concentrated, Sure-Killing

HOPKINS'

Pyrethrum

Trade Mark

PRODUCTS

combine decades of specialized insecticide experience with the kind of milling and raw materials which produces the highest obtainable killing power per ounce.

• INSECT POWDER . . .

HOPKINS' INSECT POWDER, made from the highest-testing grades of Pyrethrum Flowers, is available under two brands—CROW BRAND (Closed Dalmatian) and DEAD EASY (Japanese). Milling operations are conducted entirely in our own plant. HOPKINS INSECT POWDER is ideal for repackaging, as an ingredient in your own powdered insecticide or for the percolation method of extraction.

• 5-1 CONCENTRATE . .

Five pounds of tested flowers go into each gallon of HOPKINS' PYRETHRUM CONCENTRATE. To be had either in the CROW BRAND or DEAD EASY BRAND. Made by repercolation. Let our experience in importing, milling and manufacturing guarantee the excellence of the fly spray you are selling.

• PYRETHRUM SOAP . .

A concentrated agricultural insecticide. Available in semi-solid form, to be diluted in water at time of spraying. In bulk, for repackaging under your own brand.

Quotations Promptly Furnished

RED-RAT-SQUIL
Sold both in powder and liquid form. A specific to rats, perfectly harmless to human beings or domestic animals.

DERRIS ROOT
Sold in powdered form with a guaranteed rotenone content.

DERRITOX POWDER
Highly effective in exterminating fleas, lice and vermin. Contains active Derris, Pyrethrum and other ingredients. Non-poisonous.

DERRITOX SHAMPOO
A liquid shampoo, ready for use on animals. Highly effective as a vermin killer. Makes an excellent cleanser.

Complete Stocks Always On Hand

J. L. HOPKINS & Co.

220 BROADWAY . . . NEW YORK

its quantity intended for use or to be used, per thousand cubic feet must be clearly stated.

(b) Where sodium cyanide is used, 40 ounces shall be considered the equivalent of sixteen ounces of HCN.

(c) No contract of fumigation work shall include exterminating (insecticide) work, each must be separate and individual. Regardless of the amount of HCN used, the price herein given for the first one thousand cubic feet, must be the minimum.

Section 5

No individual shall be engaged either as employer or employee who is not a citizen of the United States. Exception shall be made in the case of those who can present first papers.

(Details of the administration of the code under the direction of the Society of Exterminators and Fumigators of New York then follows in accordance with the law and general code conditions.—Ed. Note.)

——o——

Papers of incorporation have been filed in New York State for the National Association of Exterminators and Fumigators. The incorporators are W. O. Buettner, Irving H. Josephson, Frank J. Rauch, N. K. Concannon, Harry Stuckner. All are members of the Society of Exterminators and Fumigators of New York, W. O. Buettner being president of the New York group.

Mr. and Mrs. Samuel H. Bell and family of Pittsburgh will return from a two month motor trip through Europe late in August. Here they are as they sailed for Europe in June from Baltimore. Left to right: Charlotte, Jane, Mr. Bell, Mrs. Bell, and Samuel, Jr. Mr. Bell is associated with the Koppers Products Co. of Pittsburgh and is a vice-president of the National Association of Insecticide & Disinfectant Manufacturers.

——o——

Tobacco By-Products & Chemical Corp., Louisville, is advertising a new use for its "Black Leaf 40," telling home owners that it will keep cats and dogs away from flowers and shrubs.

——o——

Dr. J. A. Trautman has taken the place vacated by Dr. C. L. Williams at the Rosebank, S. I., office of the U. S. Public Health Service. Dr. Williams has been transferred to New Orleans in charge of the local office there. He is Senior Surgeon in the U. S. Public Health Service, and has served in the New York territory for the past eight years.

HUDSON SPRAYERS

Here's the

CARDINAL

(3-quart continuous sprayer)

No other sprayer appraches the CARDINAL in performance. No sprayer produces results which are as nearly perfect.

It has a powerful pump, soldered *into* the tank, doubly reinforced by a heavy handle grip and brace. The tank holds 3 quarts, made of galvanized steel, double seamed and thoroughly soldered.

The brass adjustable nozzle provides for all types of spray, from a finely broken up fog to a solid stream. A lock nut insures nozzle remaining in desired position.

These are simply mechanical details. The important thing to you and your customers is the extraordinary performance of this new sprayer. It is almost effortless in operation. A slow, easy pumping builds up an ample head of pressure. The result is a continuous spray with absolutely no break between strokes.

Write for Catalog S 27—just printed.

H. D. HUDSON MFG. CO.

589 E. ILLINOIS STREET, CHICAGO

Branches in principle cities

"Clean-Up with" VOGEL SPRAYERS

Vogel Sprayers give you the greatest returns in profits and satisfaction because they are staunchly constructed for long service at an economy price.

THE SPRAYERS are compact, durable and well worth a higher price. Regular hand and continuous types.

THE CANS, which are standard insecticide containers, come plain or lithographed in standard stock sizes for liquid contents, gross or carload lots.

Also **Deodorizing Block Holders —Shaker Top Cans For Para**

WILLIAM VOGEL & BROS., Inc.

37-47 South 9th St., Brooklyn, N. Y.

Insect Murder Is Not A Crime

Get all the "kills" you can by using

BENKERT'S PYRETHRUM

Ground
Powder
Concentrate No. 15
Derris
Red Squills

Will increase both your percentage of kill and your profit.

W. BENKERT & COMPANY, INC.

100 Gold Street — New York City

REPRESENTATIVES

Chicago
Mr. Even M. Tysdal,
325 West Huron St.,
Chicago, Illinois

Detroit
Mr. R. M. Stevenson,
2457 Woodward Avenue,
Detroit, Michigan

St. Louis
Joseph Fahey Brok. Co.,
Cotton Belt Bldg.,
St. Louis, Mo.

Stone Joins Advertising Agency

Cowan & Dengler, New York, have announced the association with their organization of Evans E. A. Stone, recently president of William Peterman, Inc., and past president of the National Association of Insecticide and Disinfectant Manufacturers. Since his graduation from the University of Michigan Mr. Stone has had seventeen years of experience in the marketing and advertising of chemical specialties and drug products. For three years he was with the eastern branch of Lambert Pharmacal Co., followed by three years as assistant secretary of the National Wholesale Druggists' Association. He then joined Stanco, Inc., as advertising manager, directing advertising of "Flit," "Nujol" and "Mistol" over a period of ten years.

Evans E. A. Stone

—o—

Pyrethrum Cultivation in Kenya

Pyrethrum is being successfully cultivated in Kenya, Africa. Considerable acreage has been given up to this crop. A Kenya Pyrethrum Growers Association has been formed and the Agricultural Department of the Kenya Government is assisting growers by providing tested seed obtained from the Rothamsted Experimental Station in England. The plants cultivated in Kenya produce a prolific crop of flowers and the yield per acre is estimated as 4,500 to 6,000 pounds. There is a local market for pyrethrum amounting to 100,000 pounds annually. Experiments have shown that the pyrethrum content of the flowers is high.

—o—

McCormick & Co., Baltimore, announces an increase of 25 per cent in the salaries of 150 factory employees who have previously been working at less than recently suggested minimum wages. This is merely a temporary arrangement pending adoption of definite codes by the several industries with which the company is connected.

—o—

Union Oil Company of California, makers of "bif," a new liquid insecticide, are employing a toxicity chart in their advertising of this product which rates "bif" at 100 per cent effectiveness and six competing sprays at percentages ranging from 49 to 92.

—o—

Harry A. Ungar, Inc., Los Angeles, has been appointed national distributor for "Murdirco" products made by Murray Director Corp. These include "Murdirat," a rat poison, and "Murdirmoth," a moth-proofing liquid.

—o—

White Tar Co., Kearny, N. J., has appointed Batten, Barton, Durstine & Osborne, Inc., New York, as advertising agents.

Reilly TAR & CHEMICAL CORPORATION

12 PLANTS to Serve You

CRESYLIC ACID
CRESOL
CRESOL U. S. P.
XYLENOL
TAR ACID OILS
NAPHTHALENE

. . . and other Coal Tar Chemicals for the

SOAP and DISINFECTANT INDUSTRY

Reilly
TAR & CHEMICAL CORPORATION
MERCHANTS BANK BLDG., INDIANAPOLIS
500 Fifth Ave., New York
2513 S. Damen Ave., Chicago
12 Plants to Serve You

KOPPERS

TAR ACIDS
CRESOL U.S.P
CRESYLIC ACID
98% to 100% • STRAW COLOR
TAR ACID OILS
PHENOLS
NEUTRAL
HYDROCARBON OIL

KOPPERS PRODUCTS COMPANY
1249 KOPPERS BUILDING
PITTSBURGH, PA.

Know What You Are Buying

As a buyer or consumer of liquid insecticides you must have some medium for ascertaining the efficiency of the products you purchase and sell.

Why guess or be in doubt? You have at your disposal a medium for purchasing insecticides on an intelligent basis.

Entomological testing by the Peet-Grady method, and chemical examination of insecticides are now available.

Charges are moderate, and our completely equipped and expertly directed laboratory is at your service.

ENTOMOLOGICAL TESTING LABORATORIES, INC.
114 E. 32nd St. New York, N. Y.

PHOSPHORUS PASTE

Insecticide
and
Rodent Killer

Phosphorus is the most toxic chemical used to exterminate rats. It is more toxic than arsenic, barium, strychnine or thallium sulphate.

Phosphorus Paste is also an effective exterminator of water bugs and roaches.

There is no fire hazard connected with the use of our Phosphorus Paste.

It is a standardized product that is exceptionally smooth and consistently uniform.

Sold in 10, 25, 50 and 100 pound pails.

POISON GRAINS

Effective and economical exterminators of mice.

Poison Rye (colored green)
Poison Oats (colored blue)
Poison Wheat (colored red)
Poison Barley (colored purple)
Poison Canary (natural color)
Mixed Poison Grains (colored four seed mixture)

Packed in 10, 25, 50 and 100 pound drums.

Write for Quotations

SENNEWALD DRUG COMPANY, Inc.
800 Hickory Street Saint Louis, Missouri
Established 1855

New English Disinfectant Issue

Pharmaceutical Products, Ltd., a new British disinfectant concern, has just floated an issue of £125,000 ($625,000) of 6½ per cent £1 guaranteed redeemable preference shares at par. The lists had to be closed five minutes after they were opened owing to heavy oversubscription. This enterprise was established last April in order to finance and develop the sale of proprietary articles in association with Savory & Moore, chemical manufacturing firm, which owns the £50,000 of ordinary capital. The new company has succeeded in securing the sole agency for the world of Condy's Fluid, Condy's crystals, and all other disinfectant products of Condy & Mitchell, and the entire share capital of Blackaller & Pleasance, perfumery distributors.

——o——

Anderson-Pritchard Oil Corp., Oklahoma City, Okla., is now offering to the trade a special oil for fly spray manufacture in which the petroleum odor has been neutralized. This is known as Apco Naphtha B-280. The company also manufactures special solvents for manufacturers of spotting fluids and cleaning compounds, and also for the dry cleaning soap trade. Among the solvents manufactured for extraction of fats, oils, and greases, the company makes a highly refined product, Apcothinner, and for reclamation of grease from grits, Petrobenzol.

——o——

Chicago Registration

(*From page* 91)

F. O. Huckins, Rex Research, Inc., Toledo.
G. Ferris, W. B. McCloud & Co., Chicago.
M. B. Jester, Calumet Refining Co., Chicago.
Harry Kerstein, Advanced Exterm. Service, Chicago.
E. J. Voss, Procter & Gamble Dist. Co., Chicago.
L. D. Postel, A. B. C. Exterminating Co., Chicago.
Dr. C. H. Poet, Rohm & Haas Co., Philadelphia.
C. R. Cleveland, Standard Oil Ind., Chicago.
Sam R. McKelvie, The McKelvie Pub. Co., Lincoln, Neb.
E. C. Carlson, Nat'l Broadcasting Co., Chicago.
H. W. Dietrich, J. I. Holcomb Mfg. Co., Indianapolis.
H. E. Jennings, Smithereen Co., Chicago.
W. B. McCloud, W. B. McCloud & Co., Chicago.
T. J. Bierne, Metal Package Corp., Chicago.
J. H. DeLacy, Metal Package Corp., Chicago.
Dr. David Roberts, Dr. David Roberts Vet. Co., Waukesha, Wis.
Smith L. Riardon, Owens-Illinois Glass Co., Toledo.
C. J. Copeland, Food Field Reporter, Chicago.
M. Bailie, South Bend Jan. Supply Co., South Bend.
E. L. Rhodes, Food Field Reporter, Chicago.
E. M. Tysdal, Ungerer & Co., Chicago.
H. W. Cole, Baird & McGuire, Inc., Holbrook, Mass.
G. E. Kummerow, Continental Can Co., Chicago.
J. C. Bennett, Wilson & Bennett Mfg. Co., Chicago.
Frank S. Woods, Allaire, Woodward & Co., Chicago.
S. Schroder, Allaire, Woodward & Co., Chicago.
Wm. S. Carlisle, Williams Sealing Corp., N. Y. C.
W. F. Felber, O'Cedar Corp., Chicago.
A. Newar, Neway Products Co., Chicago.
R. C. Watson, Ungerer & Co., N. Y. C.
J. Errington, Sherwin-Williams Co., Chicago.
F. J. Curran, Zoro Co., Chicago.
H. F. Siddons, Wm. Cooper & Nephews, Chicago.
C. H. Boys, Hercules Powder Co., Inc., Chicago.
S. J. Katz, Koppers Products Co., Pittsburgh.
R. T. Cooper, Williams, Sealing Corp., Decatur, Ill.
E. J. Strobel, Verley Co., Chicago.

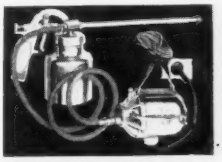
FULL KILLING POWER

Presto Electric Spray Gun—Model 102

WITH Presto Electric Spray Guns

There is no loss of insecticide efficiency with Presto Electric Spray Guns. They deliver the liquid in a powerful spray—*at full killing power.*

Designed to give ease of operation. There is a Presto Electric Spray Gun to meet every type of requirement.



Presto Electric—Model 88-94 Shoulder Strap Equipment

They mean ultimate economy—for they can accomplish more and last longer. Thousands are now in use in dairies, grain mills, poultry houses, hospitals, institutions, hotels, etc., throughout the country.

Made by one of the oldest and largest companies manufacturing spraying equipment. You can depend on "Presto's" to do justice to your insecticides and disinfectants.

Presto Model 102 for light work. Model 88-94 for larger jobs. Send the coupon today for the details and sales plan.

SEND THE COUPON TODAY.
METAL SPECIALTIES MFG. CO.,
3200 Carroll Ave., Chicago, Ill.

Send details of Presto Insecticide Spray Guns and Sales Plan.

Name .....
Address .....
City .....State.....

FLOOR WAX

LIQUID
PASTE
POWDER

New Improved Self-Polishing Liquid Wax

UNDER YOUR OWN LABEL

We print the label

Send for Samples and Quotations

WINDSOR WAX COMPANY

50 Church Street — *REctor 2—0661* — Factory: 611-617 Newark St., Hoboken, N. J. — **New York, N. Y.**

GUTMANN'S

C.T.

SCREW CAPS

AND

"FILMA-SEAL"

(the double seal of cap and film)

Prevents Leakage and Evaporation

Is a GUARD against COUNTERFEITING

Cap may be printed with a warning to purchaser not to accept if inner seal is broken or tampered with.

Used on many Nationally known advertised products

FERDINAND GUTMANN & CO.

BROOKLYN, N. Y.

Established 1890

U. S. Patent & Pats. Pending—Trade Marks Reg.

SOAP POWDER

FLUFFY AND HEAVY

Scouring Powder

and

Detergent

Packed in barrels or kegs.
In bulk to the trade.

STEVENS SOAP CORP.

200 Sullivan St., Brooklyn, N. Y.

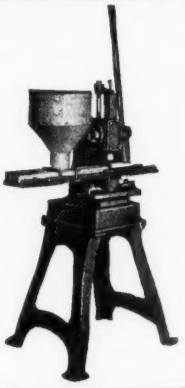
CUmberland 6—3747

for low cost *in* para block *manufacture*

These two practical machines are all you need to produce high quality para blocks or cakes. The small machine on the left will thoroughly mix all ingredients. The large machine on the right will compress the mixture into any shape dies can give.

In addition, the mixer can be used on other dry products such as roach powder, cleansers, bath salts, etc. It will also give a smooth, soft and velvety texture to creams.

The hand lever press has more power than cheap foot presses. Inexperienced operators can rapidly turn out fine looking blocks. Send us some of your material and let us show you some specimen cakes. The press will save from 5% to 10% over the hot process.



HUBER MACHINE CO. **259 46th St., Brooklyn, N. Y.**

Makers of Good Soap Machinery for Forty Years

CLASSIFIED ADVERTISING

Classified Advertising—All classified advertisements will be charged for at the rate of ten cents per word, $2.00 minimum, except those of individuals seeking employment where the rate is five cents per word, $1.00 minimum. Address all replies to Classified Advertisements with Box Number, care of *Soap*, 136 Liberty St., New York.

Note: All advertisements must be in publisher's hands by the first of the month for that month's issue.

Positions Wanted

Soapmaker and Perfumer: On laundry and toilet, soda or potash soaps, all processes; also toilet preparations; Middle West preferred. Address Box 240, care *Soap*.

Soap Maker and Chemist; can make all kinds of soaps. Has long experience in soap business and good record. Desires new connection. Address Box 242, care *Soap*.

Cost Accountant: Five years' experience toilet and laundry soaps. Could be of real help to management in small soap business. Address Box 244, care *Soap*.

Chemical Engineer, Soapmaker and Superintendent: Practical experience in boiled and semi-boiled laundry, toilet, textile and shaving soaps. Address Box 243, care *Soap*.

Chemist—Young lady with three years' experience with well-known manufacturer of liquid soaps, tooth paste, etc., desires new connection. Address Box 245, care *Soap*.

Young Man: Age 22; graduate in a university's evening chemistry course, equivalent college education, desires to learn soap analysis or an allied line; excellent references; location immaterial; control experience in other fields. Address Box 241, care *Soap*.

Chemist and Soapmaker: Young man experienced soap, fatty oils and detergent industries, desires new connection. Has had charge of production and laboratory. Address Box 234, care *Soap*.

Representative—small sales organization with office and warehouse facilities in Baltimore, covering eastern seaboard from Baltimore south, is open to represent a new account selling to soap, cosmetic, insecticide, candy, drug, and allied trades. Prefer tube, chemical, cap, box, bottle, or similar account. Address Box 246, care *Soap*.

SOAP MACHINERY

Every item shipped from our shops at Newark, N. J., is thoroughly overhauled and rebuilt before shipment.

SPECIALS

1—Soap Chip Dryer, 1200 lb.
2—Dopp 650 gal. Steam Jacketed Kettles.
1—Dopp 1200 lb. Steam Jacketed Crutcher.
1—Hershey 1000 lb. Horizontal Jacketed Crutcher.
1—1000 lb. All Steel Soap Powder Mixer.
2—Holmes & Blanchard 24" and 36" 4 cage Disintegrators, for grinding soap powder—no screens, no plugging.

25—Soap Frames, 60"x45½"x14", with trucks.
6—Plodders, Houchin, Rutschman, 4", 4½" double screw, 6", 8", 10".
14—Filter Presses, 42"x42" to 12"x12".
8—Granite Mills, 3 and 4 roll, 12", 18" and 24".
15—Horizontal Mixers, Jacketed and Plain, 15 gal. to 1000 gal.

MISCELLANEOUS—Kettles, Mixers, Pony Mixers, Powder Fillers, Tube Fillers, Labelers, Soap Presses, Soap Wrappers, Tanks, Boilers, Pumps, etc.

Send for Latest Bulletin.

CONSOLIDATED PRODUCTS COMPANY, INC.

15-21 Park Row, N. Y. C. BArclay 7—0600

We buy your idle Machinery—Single items or entire plants.

REBUILT EQUIPMENT

Soap Machinery Specials

3—8 in. and 10 in. H. A. Plodders.
2—Tube Fillers, motor driven.
3—Tube Closers and Clippers.
1—5 Roller Steel Mill.
1—Ralston Power Soap Press.
2—Broughton Mixers.
1—Sargent Soap Chip Dryer.
6—1200 lb. Frames.
2—Foot Para Block and Soap Presses.
1—Houchin Amalgamator.
3—Dopp and Houchin Vertical Crutchers.
1—1500 lb. Horizontal Crutcher.
2—Granite Stone Mills, 3 and 4 rolls.
4—Soap Powder Grinders.

Cutting Tables, Slabbers, Kettles, Pumps, Tanks, Filter Presses, Wrapping Machines, Tube Fillers, Closers, Crimpers, Dry Powder Mixers, etc.

Send for Complete List (Bulletin No. 10)

We buy and sell from single items to complete plants.

Stein-Brill Corporation

183 Varick Street **New York, N. Y.**

Phone: WAlker 5-6892-3-4 **Cable Address: "BRISTEN"**

IF YOU SELL

VITOZONE

PROCESS

DEODORANTS

—YOU'LL SELL MORE!

Exclusive new perfuming process of PURE PARA—dichlorobenzene under pressure up to EIGHTY TONS produces the VITOZONE DEODORANT BLOCKS.

MORE CONCENTRATED
MORE EFFICIENT
MORE ECONOMICAL

Write for Sample, Odors, Sizes and Price for packaging under

YOUR OWN LABEL

FULD BROS. Inc

2310 Frederick Ave., Baltimore, Md.

Sanitary Chemicals
For Jobbing Trade

SOAP DISPENSERS by PALMER

The Palmer
Super Server

Palmer "D. C."
Dispenser
(Dependable Construction)

A type and size dispenser for every requirement—in a complete price range.

An exceptional value is the low-priced push-in type Super Server (left). Metal parts of non-corrosive, stainless, chrome alloy. Bracket in beautiful natural chrome finish. Valve parts easily removable for cleaning. Decagon bowl of crystal glass—opal glass on special order. Large 1-inch opening makes filling easy. (Decagon black bakelite cap.) The lowest-priced push-in dispenser, yet neat, compact, durable.

The Palmer "D. C." Dispenser (left) — lowest priced dispenser ever offered. Fill through large 1-inch top opening without removing or inverting bowl. (Decagon black bakelite cap.) Has simple, positive, spring-controlled valves. Regularly furnished with decagon bowl like Super Server.

We manufacture a complete line of janitor and sanitary supplies. Write for our distributor proposition.

Palmer PRODUCTS INC
WAUKESHA, WIS.
Adjacent to Milwaukee

Why $EFTON ¢ans

Save the Difference

BECAUSE Sefton Cans will package your product economically; because Sefton Cans dress your product attractively; because Sefton Cans move your product off the dealers' shelves.

Our packaging engineers will work out the most practical container for your particular purpose.

Sefton Cans have often saved manufacturers from 10% to 50% on their packaging.

Just phone the Sefton representative in your town. He'll be glad to give you all the information you will need.

Fibre Bodies with Fibre or Metal Ends

SEFTON NATIONAL FIBRE CAN COMPANY
3207 Big Bend Road, Maplewood, St. Louis, Mo.

STEEL DRUMS

That are built to salt!

30-55-110 gal. sizes

The BEST
Containers for
LIQUID SOAPS
DISINFECTANTS
CLEANSERS
ESSENTIAL OILS
VEGETABLE OILS
CHEMICALS
GLYCERIN
ETC.

Black, Galvanized, Tinned

Sturdy and long lasting, the Trageser heavy duty steel drum will be carrying your materials to market long after cheap containers have found the junk pile. Order a sample drum.

JOHN TRAGESER STEAM COPPER WORKS
GRAND STREET MASPETH, L. I., N. Y.

Special tanks, tubs, pails, etc.

Positions Open

Soapmaker: Wanted on laundry chips and oil soaps, full knowledge of kettle room and testing of finished products; Middle West. Give age, experience and salary; steady employment for right man. Address Box 236, care *Soap*.

Salesman Wanted with experience selling essential oils, perfume and flavor oils; must have following. Address Box 227, care *Soap*.

Soap Chemist: Wanted by eastern soap manufacturer. Degree and minimum of three years' experience in direction of labortory and handling of development and control work in soap plant required. Give all details as to training, experience, personal qualifications and salary required. Address Box 233, care *Soap*.

Soap Maker Wanted. Permanent position. For work in New Jersey. Address Box 238, care *Soap*.

Salesmen wanted for textile soap trade in Massachusetts, Rhode Island and Pennsylvania. Address Box 237, care *Soap*.

Manufacturing Chemist—Twenty years' experience in chemicals, drugs, and insecticides, would like to take charge of branch warehouse in Cleveland. Address Box 239, care *Soap*.

Miscellaneous

Wanted: We are in the market for liquid soap machinery. Address Earle Soap Manufacturing Co., 303 N. Eutaw St., Baltimore, Md.

Wanted: Small second hand soap grinding machine. Must be in perfect condition and very cheap. Address Charles W. Berg Labs., 1827 N. 5th St., Philadelphia, Pa.

Patents and Trade Marks: Patent and profit by your inventions. Register your trade marks and protect your most valuable assets. Expert personal service. Address Lester L. Sargent, Registered Patent Attorney, 1115 K Street, N. W., Washington, D. C.

Lambert Co., St. Louis, reports net income of $470,938, or 63c a share, for the second quarter of 1933, comparing with $1,147,699, or $1.54 a share, during the same quarter last year. Earnings in the first half were $1,288,967, or $1.73 a share, comparing with $2,568,384, or $3.44 a share, last year.

—o—

Alex Chemical Mfg. Co., Baltimore, has started production of a liquid bleach, and will shortly add other items to its line. L. S. Toomig heads the concern.

ZIP-ON

LIQUID FLOOR WAX

NO RUBBING—NO POLISHING

Only has to be sold once. Users insist on *ZIP-ON* because it is *defintely superior.* A trial will show you why!

JOBBERS!—you can hold your customers and make new ones with *ZIP-ON* — recommended and approved by the Rubber Mfg. Association.

Ask for a Sample Can

SHAWMUT SPECIALTY CO.
89 BICKFORD ST. BOSTON, MASS.

PYRETHRUM

• POWDERED

Years of experience and long established selective buying contacts insure the high quality of McCormick's Pyrethrum.

A close examination of McCormick's Powdered Pyrethrum will clearly show uniformly fine particles due to the air flotation process.

• GRANULATED

Analytical and biological tests guarantee the high toxic quality of McCormick's Pyrethrum.

So that the toxic content may be efficiently extracted, all the achenes are broken up in McCormick's granulated Pyrethrum. This allows maximum extraction.

• CONCENTRATED OIL EXTRACTS

Expert supervision of rigidly controlled methods insures known killing power in McCormick's Pyrethrum.

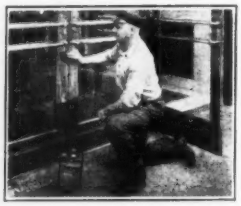
The base for McCormick's Oil Extract is a Petroleum Oil that has been refined to complete freedom from any kerosene odor.

Standardized Liquid and Dust Pyrethrum Insecticides

McCORMICK & CO., Inc.
• BALTIMORE, MARYLAND •

TROJAN TRIPLE-ACTION METAL POLISH

will double your polish business



Trojan metal polishes, packed under your own label, will double your metal polish business because consumers can't resist these new 1933 features. In the first place, they are made in a variety of colors. Secondly, they are available in the following grades as desired by your customer — fast dry, medium dry, slow dry, heavy body, thin body, medium body. They quickly produce a brilliant lustre on all kinds of metal. Prices are rock-bottom—send for a generous test sample.

TROJAN PRODUCTS & MANUFACTURING CO., INC.

3101-07 S. Wabash Ave. Chicago, Ill.

Bulk Metal Polish

for the jobbing trade

BIG PRODUCTION — *LOW* COST!

That is the reason jobbers all over the country are finding it profitable to stock SOLSHINE polish—that and our years of experience in manufacture, guaranteeing a product that will satisfy your customers and build repeat business. You can buy a better metal polish from us than you can manufacture in limited quantity and you can save money into the bargain. SOLSHINE polishes do not scratch or separate and clean as well as polish. We supply either paste or liquid and pack both in everything from a one gallon can to 55 gallon drums. Let SOLSHINE act as your own metal polish plant.

Try it at our expense. Ask for a sample can and new low bulk prices.

SOLSHINE MFG. CO.

Established 1897

17 CALDWELL STREET, BOSTON, MASS.

found money

If *you* are not using Vioflor you are throwing away 40% to 70% of your cost for perfuming insecticides, naphthas, polishes, inks, para-blocks, etc . . . .

Without changing the odor effect now in your product!

It takes but a few minutes to demonstrate this.

Allow us to submit samples and further details.

***Manufactured by* CREPIN & DOUMIN, Ltd., London, England**

Sold in the United States and Canada by

JOHN POWELL & CO., Inc.

114 East 32nd Street :: :: New York, N. Y.

Modern Soap Perfumes

by Frank H. Sedgwick

Practical handbook on the science of soap perfumery. The author lays down the general principles which apply, and also offers a number of novel and useful suggestions on compounding. His experience in soap perfumery has been extensive in the British soap trade.

Priced, post free, at $1.00 per copy. Send check with order.

American Agents

MAC NAIR-DORLAND CO.

136 Liberty St. New York City

Fergusson Laboratories, 24 Oregon Ave., Philadelphia, manufacturers of bulk disinfectants, liquid soap, liquid soap base, etc., are now offering these specialties to the jobbing trade all over the country. Heretofore, their activities among jobbers have largely been confined to the Philadelphia district. The company is associated with Alex C. Fergusson Co., representatives in the Philadelphia territory for a number of manufacturers of chemical products.

—o—

Experiments on the use of sodium selenate as a moth repellant, conducted by the German I. G. Farbenindustrie, are reported to have been given up due to the high cost of this material.

—o—

Magnus, Mabee & Reynard, Inc., New York, essential oils and aromatics, have issued their catalog for July and August, 1933.

—o—

Disinfecting & Exterminating Corp., New York, has opened a Westchester office and service department at 239 North Ave., New Rochelle, N. Y. The telephone number is New Rochelle 1444.

—o—

McCormick & Co. (Canada), Ltd., has been established in Toronto as Canadian subsidiary of McCormick & Co., Baltimore.

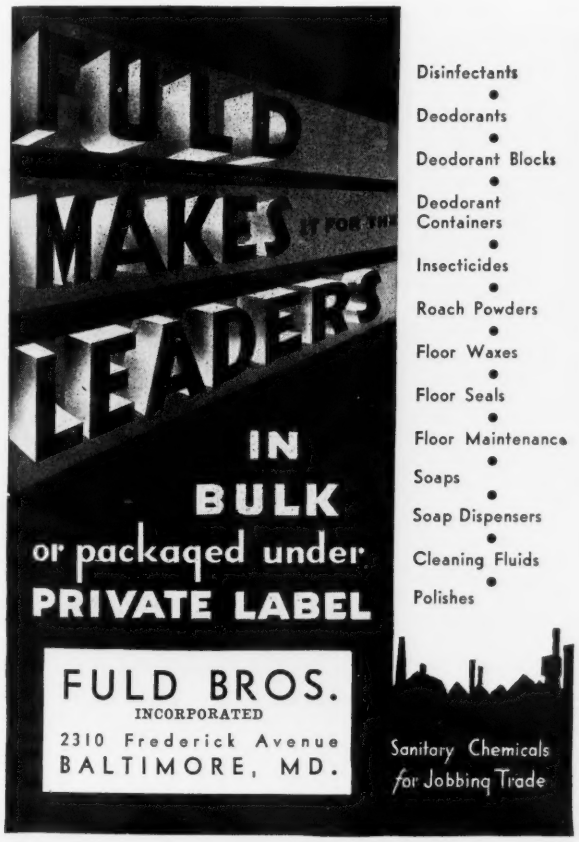
We Manufacture

For The Trade ONLY

Liquid Soap Base
Auto Soaps
Potash Oil Soap
Shampoo
U.S.P. Cresol Compound
Coal Tar Disinfectants
Liquid Soap
Pine Oil Soap
U.S.P. Green Soap
Shampoo Base
Pine Oil Disinfectants
Insecticides

Ask for samples of these specialty bulk products

HARLEY SOAP CO.
2852 E. Pacific St. Philadelphia



KLEENWELL

LIQUID GLOSS WAX

is making profits for jobbers!

Here is the modern treatment for floors—Kleenwell Liquid Gloss Wax—can be applied with a mop or cheese cloth rag; dries quickly and gives a fine bright polish without rubbing; non-inflammable and non-explosive; protects the surface; prolongs the life of floors. Add it to your line NOW.

* *Kleenwell Liquid Gloss Wax has been approved by leading linoleum, rubber and composition floor manufacturers.*

Send for a generous testing sample and new low price!

CHICAGO SANITARY PRODUCTS CO.
2526 W. CONGRESS STREET
CHICAGO, ILL.

Where to buy

RAW MATERIALS AND EQUIPMENT

for the Manufacture of Soaps and Sanitary Products

NOTE: This is a classified list of the companies which advertise regularly in *Soap*. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, etc., in which you are particularly interested. Refer to the Index to Advertisements, on page 112, for page numbers. *"Say you saw it in SOAP."*

ALKALIES

American Cyanamid & Chemical Corp.
Columbia Alkali Co.
Hooker Electrochemical Co.
Niagara Alkali Co.
Solvay Sales Corp.
Stauffer Chemical Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

AROMATIC CHEMICALS

Dodge & Olcott Co.
P. R. Dreyer, Inc.
E. I. du Pont de Nemours & Co.
Felton Chemical Co.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Maybee & Reynard, Inc.
Monsanto Chemical Works
Naugatuck Chemical Co.
Newport Chemical Works
Sherka Chemical Co.
Solvay Sales Corp.
A. M. Todd Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.
Albert Verley, Inc.

BULK AND PRIVATE BRAND PRODUCTS

Baird & McGuire, Inc.
Chemical Supply Co.
Chicago Sanitary Products Co.
Clifton Chemical Co.
Davies-Young Soap Co.
Eagle Soap Corp.
Federal Varnish Co.
Fergusson Laboratories
Fuld Bros.
Harley Soap Co.
J. L. Hopkins & Co.
Hull Co.
Kemiko Mfg. Co.
Koppers Products Co.
Kranich Soap Co.
National Oil Products Co.
New York Soap Corp.
Palmer Products
Philadelphia Quartz Co.
John Powell & Co.
Geo. A. Schmidt & Co.
Sennewald Drug Co.
Shawmut Specialty Co.
Solshine Mfg. Co.
Stevens Soap Corp.
Trojan Products & Mfg. Co.
U. S. Sanitary Specialties Corp.
White Tar Co.
Windsor Wax Co.

CHEMICALS

American Cyanamid & Chemical Corp.
Bowker Chemical Co.
Columbia Alkali Co.
E. I. du Pont de Nemours & Co.
General Chemical Co.
Grasselli Chemical Co.
Hooker Electrochemical Co.
Industrial Chemical Sales Co.
Mechling Bros. Chemical Co.
Monsanto Chemical Works
Newport Chemical Works
Niagara Alkali Co.
Philadelphia Quartz Co.
Solvay Sales Corp.
Standard Silicate Co.
Stauffer Chemical Co.
Swann Chemical Co.
Victor Chemical Works
Warner Chemical Co.
Welch, Holme & Clark Co.

COAL TAR RAW MATERIALS

(Cresylic Acid, Tar Acid oil, etc.)

American Cyanamid & Chemical Corp.
Baird & McGuire, Inc.
Barrett Co.
Koppers Products Co.
Monsanto Chemical Works
Reilly Tar & Chemical Co.
White Tar Co.

CONTAINERS

Continental Can Co. (Tin Cans)
Maryland Glass Corp. (Bottles)
Metal Package Corp. (Tin Cans)
Owens-Illinois Glass Co. (Bottles)
Sefton National Fibre Can Co. (Fibre Cans)
William Vogel & Bros. (Tin Cans)

DEODORIZING BLOCK HOLDERS

Clifton Chemical Co.
Eagle Soap Corp.
Fuld Bros.
Palmer Products, Inc.
U. S. Sanitary Specialties Corp.
William Vogel & Bro.

ESSENTIAL OILS

Dodge & Olcott Co.
P. R. Dreyer, Inc.
Fritzsche Brothers, Inc.
Leghorn Trading Co.
Magnus, Maybee & Reynard, Inc.
A. M. Todd Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.
Albert Verley, Inc.

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Consulting Chemists and Engineers

Specializing in Soaps, Disinfectants, Insecticides, Polishes, Etc.

FOSTER D. SNELL, INC.

Chemists-Engineers

A technical organization offering complete consulting, research, operating and management service.

305 Washington Street Brooklyn, New York

STILLWELL AND GLADDING, Inc.

Analytical and Consulting Chemists

Members Association of
Consulting Chemists and Chemical Engineers

80 West Street New York City

FRANK R. GUNN
COMPANY

Analytical and Consulting Chemists

Ontario and Brabant Sts. Philadelphia, Pa.

Skinner & Sherman, Inc.

246 Stuart Street, Boston, Mass.

Bacteriologists and Chemists

Disinfectants tested for germicidal value or phenol coefficient by any of the recognized methods.

Research—Analyses—Tests

LLOYD A. HALL

Research and Consulting Chemist

Specialist in the analysis, development and improvement of soaps, disinfectants, insecticides, cleansers, polishes and allied products since 1915.

Complete Research and Consulting Services.

LABORATORIES

1415 W. 37th ST., CHICAGO, ILL.

Los Angeles Associate, Roger W. Truesdail, Ph. D.

CHEMICAL SPECIALTIES

For the Wholesale Trade

INSECTICIDES
CLEANERS
DISINFECTANTS
WEED KILLER

The Highest Quality Products at Lowest Prices

—o—

We Also Manufacture and Mill Special Products to Meet Your Particular Specifications.

—o—

Hammond Paint & Chemical Co.

Quality Products Since 1875

BEACON, N. Y.

F. & S.

Quality Colors
for
TOILET SOAPS
LIQUID SOAPS

TOILET PREPARATIONS

Long experience enables us to produce colors for all types of soaps.

If you have a shade you want matched send us a sample. We have complete facilities for matching.

Liquid soap colors a specialty—send for samples of F. & S. greens and ambers.

FEZANDIE & SPERRLE, Inc.

205 FULTON STREET
NEW YORK, N. Y.

Import—Manufacture—Export

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(*Continued from page* 108)

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MACHINERY

Blanchard Machine Co. (Soap Powder)
Ertel Engineering Co. (Liquid Handling)
Anthony J. Fries (Soap Dies)
Houchin Machinery Co. (Soap Machinery)
Huber Machine Co. (Soap Machinery)
Illinois Steel Co. (Stainless Steel)
R. A. Jones & Co. (Automatic Soap Presses and Cartoning Machinery)
Proctor & Schwartz (Dryers)
Stokes & Smith Co. (Packaging Machinery)
Struthers-Wells Co. (Process)

MACHINERY, USED

Consolidated Products Co.
Newman Tallow & Soap Machinery Co.
Stein-Brill Co.

METAL CAPS

Anchor Cap & Closure Corp.
Crown Cork & Seal Co.
Ferdinand Gutmann & Co.

MISCELLANEOUS MATERIALS

Derris Inc. (Derris Products)
General Naval Stores Co. (Pine Oil-Rosin)
Hercules Powder Co. (Pine Oil and Rosin)
Industrial Chemical Sales Co. (Decol. carbon, Chalk)
Kimberly-Clark Corp. (Kimpak)
Pylam Products Co. (Lathering Agent)
Rohm & Haas Co. (Insecticide Base)
Sennewald Drug Co. (Poison Baits)

OILS AND FATS

Industrial Chemical Sales Co.
Leghorn Trading Co.
Newman Tallow & Soap Machinery Co.
Theobald Annual By-Products Refinery
Welch, Holme & Clark Co.

PARADICHLORBENZENE

E. I. du Pont de Nemours & Co.
Hooker Electrochemical Co.
Monsanto Chemical Works
Niagara Alkali Co.
Solvay Sales Corp.

PERFUMING COMPOUNDS

Dodge & Olcott Co.
P. R. Dreyer, Inc.
Felton Chemical Corp.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Maybee & Reynard, Inc.
Ungerer & Co.
Van Ameringen-Haebler, Inc.
Albert Verley, Inc.

PETROLEUM PRODUCTS

Anderson-Pritchard Oil Corp.
L. Sonneborn Sons

PYRETHRUM PRODUCTS

(Insect Flowers, Powder and Pyr. Ext.)

W. Benkert & Co.
J. L. Hopkins & Co.
McCormick & Co.
McLaughlin, Gormley, King Co.
John Powell & Co.

SOAP COLORS

Fezandie & Sperrle
Interstate Color Co.
Pylam Products Co.

SOAP DISPENSERS

Clifton Chemical Co.
Eagle Soap Corp.
Fuld Bros.
Palmer Products
U. S. Sanitary Specialties Co.

SODIUM SILICATE

American Cyanamid & Chemicals Corp.
General Chemical Co.
Grasselli Chemical Co.
Mechling Bros. Chemical Co.
Philadelphia Quartz Co.
Standard Silicate Co.

SPRAYERS

Breuer Electric Mfg. Co.
Electric Sprayit Co.
Hudson Mfg. Co.
Lowell Sprayer Co.
Metal Specialties Mfg. Co.
U. S. Sanitary Specialties Corp.
William Vogel & Bros.

STEEL CONTAINERS

John Trageser Steam Copper Works (Pails and Drums)
Wilson & Bennett Mfg. Co. (Pails and Drums)

SULFONATED OILS

National Oil Products Co.

TRI SODIUM PHOSPHATE

American Cyanamid & Chemicals Corp.
Bowker Chemical Co.
General Chemical Co.
Grasselli Chemical Co.
Swann Chemical Co.
Victor Chemical Works
Warner Chemical Co.

SOAP DIES and STAMPS

—for—
TOILET SOAPS
LAUNDRY SOAPS
BATH TABLETS
STAMPING

For Foot and Power Presses

Manufacture Backed by 35 Years' Experience

ANTHONY J. FRIES

717 Sycamore Street — Cincinnati, O., U. S. A.

TRISODIUM PHOSPHATE
DISODIUM PHOSPHATE

Preferred for their colorless crystals, uniform size and sparkling appearance. Prompt deliveries made from convenient distributing points. Packed in 325-pound paper-lined barrels and paper-lined kegs. Also in bags.

BOWKER
CHEMICAL COMPANY
419 Fourth Ave., New York

COLORS

FAST SCARLET
No. 4047
is offered to you as an attractive color and a good buy.

•

Ask for sample

•

INTERSTATE COLOR CO., INC.
Suite 718-C, 5 Beekman Street
NEW YORK CITY

When you need

equipment, raw materials, etc., and can't find a ready source of supply, direct an inquiry to the Publishers of SOAP. The necessary information will be furnished promptly without charge.

MacNair-Dorland Co., Inc., 136 Liberty St., N. Y. C.

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Olive Oil

Olive Oil Foots

Deliveries spot and future in barrels, tank cars, drums or tank wagons.

ESSENTIAL OILS

Lemon—Bergamot—Orange

LEGHORN TRADING CO.
INC.
155 East 44th St., New York
Phone: VAnderbilt 3—6361-2-3
ITALY — SPAIN — GREECE — TURKEY — AFRICA

Bound Volumes of "SOAP" and "OIL & FAT INDUSTRIES"

A few complete volumes of SOAP and OIL & FAT INDUSTRIES are available, attractively bound in blue cloth covered card board—a valuable addition to your technical library. SOAP volumes cost $10.00 each, OIL & FAT INDUSTRIES $6.00 each.

SOAP, Vol. 3, 1927-28.....6 sets
SOAP, Vol. 4, 1928-29.....1 set
SOAP, Vol. 5, 1929-30.....1 set
SOAP, Vol. 6, 1930.....3 sets
(Contains 4 issues—$5.00)
SOAP, Vol. 7, 1931.....4 sets
SOAP, Vol. 8, 1932.....3 sets
O&FI, Vol. 6, 1929.....3 sets
O&FI, Vol. 8, 1931.....5 sets

MACNAIR DORLAND CO., INC.
136 LIBERTY ST. NEW YORK CITY

HULL POWDERED METAL POLISH

Private brand polish can be made better and at less cost from it.

The Hull Company

305 Washington Street
Brooklyn, N. Y.

Announcing

FUMOL

AN EFFECTIVE INSECTICIDE CONCENTRATE
FOR USE IN VAPORIZING MACHINES

Harmless to Human Beings and Animals.

Color—Water white—It will not stain.

Odor—Neutral—It will not contaminate foodstuffs.

Evaporates rapidly—Leaves no residue.

RAPID IN ACTION
THOROUGH IN EFFECT

CONTAINS NO BOTANICAL DERIVATIVES—
PRODUCES A UNIFORMLY HIGHER KILL

FUMOL is prepared for positive control of the more resistant types of insects.

FUMOL possesses the maximum penetrating qualities of a fumigant and the toxicity of a spray. Its expellent power is more rapid than that of ordinary concentrates.

FUMOL lethal vapor permeates into cracks and crevices, expelling and killing insects with amazing rapidity.

FUMOL is compounded in a refined mineral vehicle of exceptional purity. Periodic applications will insure economical household and industrial sanitation.

SAMPLE GALLONS FOR TESTING PURPOSES AT AN INTRODUCTORY PRICE

FUMOL CORPORATION

10 EAST 40TH STREET NEW YORK CITY

VIRONES

(IONONES)

Made in U. S. A.

▼▼▼▼

Virone 100%
Virone Alpha Virone Beta

This really splendid series of Ionones, recently perfected, is particularly useful in the fabrication of perfume materials and fine toilet soaps.

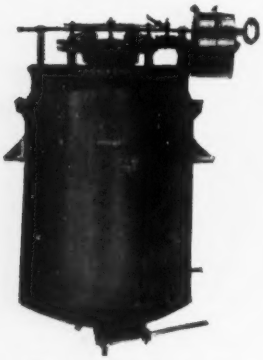
The Virones are priced quite moderately and we solicit your inquiry for samples of one or all types.

UNGERER & CO.

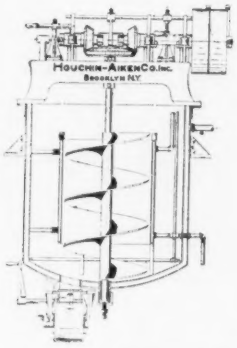
13-15 West 20th Street

NEW YORK

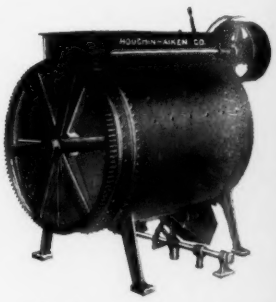
NEW and *USED*
HOUCHIN SOAP MACHINERY



Perfection Crutcher
Sliding Gate Valve



Perfection Crutcher Cross
Section View Plunger
Type Valve



Horizontal Crutcher

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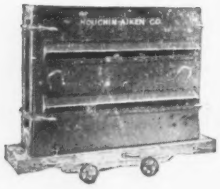
Press



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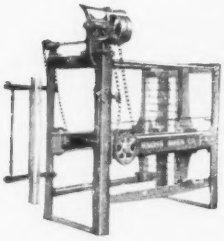
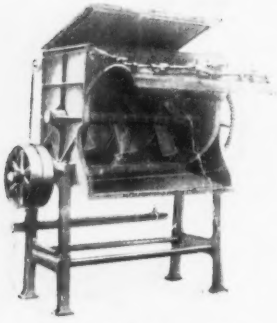


Automatic Power
Slabber

Automatic Power Cutting
Table



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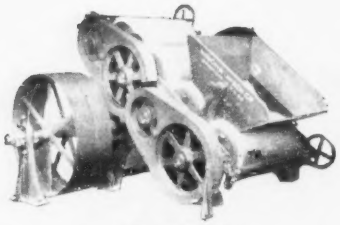
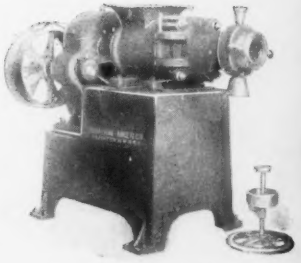


4-Roll Mill
Mills built with 3 to 12 Chilled
Iron or Granite Rolls



Spur Gear 10" Screw Plodder
Plodders furnished with 2½"
to 12" screws.

Write Us For Information Regarding MILL-LESS Method for Making Toilet Soap

HOUCHIN MACHINERY CO., Inc.

FORMERLY HOUCHIN-AIKEN CO., INC.

HAWTHORNE, NEW JERSEY